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A

SAILING DIRECTIONS
FOR
THE ISLAND
OF
NEWFOUNDLAND,
AND
ADJACENT COAST OF LABRADOR.

Compiled from the most recent Surveys.

LONDON, E.:
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ADDENDA.

DURING the progress of this work through the press, the following particulars of rocks and shoals on the south coast of Newfoundland, by Captain J. Orlebar, R.N., have been published :—

FREELS ROCK has 24 feet water on it, and lies W. $\frac{1}{2}$ S., distant $2\frac{1}{2}$ miles from Cape Pine lighthouse. Cape Mutton well open of Cape Pine clears it on the southern, and Cape English open of the land southward, on the western side. (See page 44.)

ST. MARY'S BAY.—On the western side of the bay, at $5\frac{1}{2}$ miles E. $\frac{1}{4}$ S. from Lance Point, and nearly 2 miles S.W. $\frac{1}{2}$ W. from Hare's Ears, lies the *Red Cove Rock*, with 18 feet water on it; and at 2 miles S. $\frac{1}{2}$ E. from Red Head is *Red Head Rock*, with 24 feet water over it. *Lance Rock*, with 12 feet on it, lies S.W., distant 2 miles from Lance Point. Between St. Mary's Cays and the Cape, and S.W. by S. nearly $5\frac{1}{4}$ miles from St. Mary's lighthouse, is the *False Cay*, with 12 feet upon it. (See pages 44 and 45.)

PLACENTIA BAY.—On the east side of the bay, at nearly $5\frac{1}{2}$ miles N. by W. from St. Mary's lighthouse, lies the *Perch Rock*, with 15 feet water on it; and about $1\frac{1}{4}$ mile N.W. of the *Perch Rock* is the *Nest Rock*, with 9 feet over it, lying North nearly $6\frac{1}{4}$ miles from the lighthouse. At nearly 2 miles W. by S. from Breme Point is the *Curslett Rock*, with 12 feet upon it; and at $3\frac{1}{2}$ miles N.E. by N. from Breme Point is the *Patrick Rock*, with 9 feet on it. About $1\frac{3}{4}$ mile S.W. by S. from the Virgin Rocks lies the *South Rock*, with 9 feet upon it; at nearly $1\frac{1}{2}$ mile S.S.W. $\frac{1}{2}$ W. from the Virgin Rocks lies the *False Girdle*, with 6 feet water on it; and at $1\frac{1}{4}$ mile West from Verde Point is the *Gibraltar Rock*, with only 4 feet on it. (See pages 45 and 46.)

PLACENTIA HARBOUR has now only 10 feet at the entrance, instead of 18 feet, as at the time of Cook's survey. (See page 46.)

BURIN HARBOUR.—On the west side of Placentia Bay, near the south entrance to Burin Harbour, at rather more than $6\frac{1}{2}$ cables S. by E. from Little Burin Island, lies the *Emberly Rock*, with 24 feet on it; and at $2\frac{1}{2}$ cables S.W. by S. from Cat Island is the *Cockle Rock*, with 18 feet on it; also, at $1\frac{1}{4}$ cable West from Poor Island is the *Poor Rock*, with 12 feet water over it.

Within the entrance of the harbour, and at half a mile E.N.E. from Neck Point, and a cable's length from the shore of Burin Island, lies the *Mine Rock*, which has only 10 feet upon it. (See page 52.)

Off Small Point, southward of Burin Island, at $3\frac{1}{2}$ cables W. by S. $\frac{1}{2}$ S. from the point, lies the *Bass Rock*, with 20 feet water on it; and off Sauker Head there are two rocks, the outer with 21 feet on it, lying S. by E. $\frac{3}{4}$ E. $2\frac{1}{2}$ cables from the head. (See page 53.)

MORTIER BANK.—At nearly $6\frac{1}{2}$ miles E. by S. $\frac{1}{2}$ S. from Burin lighthouse lies the Mortier Rock, on the bank of the same name, with 18 feet water over it. (See page 51.)

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SAILING DIRECTIONS

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*** The Bearings and Courses throughout this work are by compass, unless expressed thus (E.N.E.), and are for still water; the utmost attention should, therefore, be given whenever they lead across the stream of tide, whether directly or obliquely, and due allowance be made for their influence. The depths refer to low water, spring tides; the range of a tide means the difference between its low and high water levels. The distances are in nautical miles of 60 to each degree of latitude.*

The amount of westerly variation in 1861 at the various points within the limits of this work was as follows :—

<i>At the Virgin Rocks . . .</i>	<i>30° 36'</i>	<i>At Cape Norman . . .</i>	<i>37° 50'</i>
<i>„ Cape Race . . .</i>	<i>29° 50'</i>	<i>„ Anchor & Forteau Points</i>	<i>36° 36'</i>
<i>„ St. John's . . .</i>	<i>31° 36'</i>	<i>„ St. John's & Shecatia Bs.</i>	<i>35° 5'</i>
<i>„ Cape Bonavista . . .</i>	<i>33° 20'</i>	<i>„ Bonne Bay & C. Whittle</i>	<i>31° 50'</i>
<i>„ Cape Freels . . .</i>	<i>34° 20'</i>	<i>„ Cape Pine . . .</i>	<i>29° 50'</i>
<i>„ Canada Bay . . .</i>	<i>35° 50'</i>	<i>„ Placentia . . .</i>	<i>30° 20'</i>
<i>„ Cape Bauld . . .</i>	<i>38° 10'</i>	<i>„ Miquelon Island . . .</i>	<i>28° 20'</i>
<i>„ Belle Isle . . .</i>	<i>38° 50'</i>	<i>„ Cape Ray . . .</i>	<i>27° 45'</i>

The estimated annual increase on the eastern shores of Newfoundland and in the strait of Belle Isle is 7', and the general line of equal variation there runs about N.W. by W. $\frac{1}{2}$ W. and S.E. by E. $\frac{1}{2}$ E., true; and in the Gulf of St. Lawrence 6', where the equal-variation lines run N.W. by W. and S.E. by E., true.

PART I.

NEWFOUNDLAND.

GENERAL REMARKS.

THE ISLAND OF NEWFOUNDLAND is the most eastern part of America, and the nearest to Europe. The distance between the island of Valentia on the south-west coast of Ireland, and St. John's on the east coast of Newfoundland, is 1656 nautical miles. The island is situated between latitudes 46° 40' and 51° 39' N., and longitudes 52° 44' and 59° 31' W., on the north-east side of the entrance to the

Gulf of St. Lawrence. Its form is very irregular, and the shores are broken by numerous bays and harbours. Its north-western extremity is separated from the coast of Labrador by the Strait of Belle Isle. The south-west point is opposite to Breton Island; it is open on the east to the Atlantic, and its west coast forms the eastern boundary of the Gulf of St. Lawrence. Its extreme length, measured on a line extending from Cape Race in the south-east, to Cape Norman, at its northern extremity, is 326 miles, and the length from Cape Freels, the northern entrance to the Bay of Bonavista, to Cape Ray is about 250 miles. The island has never thoroughly been surveyed, but it is computed to contain 35,500 square miles, though some estimates make it considerably more.

The appearance of Newfoundland, from the sea, is extremely rugged, the coast line being broken into many inlets and harbours. All the settlements have been made for the purpose of prosecuting the fishery: they have been uniformly placed on the coast, and but few attempts have been made to acquire any knowledge of the interior. These settlements now amount to 60 or 70, the greater part of which are on the eastern and southern shores, and particularly the former. The only large town is St. John's, on the east side of the island, which, besides being the seat of government, is the principal harbour for trading vessels.

Newfoundland was probably discovered by the Northmen about the year 1000, after which it was entirely unknown to Europeans until John and Sebastian Cabot, on their second voyage, discovered Cape Bonavista, on the 24th of June, 1497. Landing in the adjoining bay, they found several natives dressed in the skins of animals, and formally took possession of the island, which they called *Baccalaos*, the name given to codfish by the natives; a name, it may be remarked, which has been adopted into the language of Portugal (*bacalhao*), from which country some adventurers subsequently proceeded to the island and formed a settlement, from which they were driven by the English under Sir Francis Drake in the reign of Elizabeth. In 1610 a charter was granted to a company of adventurers of London and Bristol, for colonizing Newfoundland, and a colony was established at Conception Bay. Four years later, courts of justice were established by royal authority in the island; and the first Lord Baltimore, in 1623, established a flourishing colony at Ferryland, on the east coast, where he himself resided for many years. From this time numerous settlements were continually made along the east coast by the English, while the French established themselves on the south, at Placentia, in the bay of that name, and maintained possession of it until the treaty of Utrecht, in April, 1713. By this treaty Newfoundland and its dependencies were declared to belong wholly to Great Britain, but the French were allowed to fish and cure what they should catch on some parts of the shore, but were not allowed to erect fortifications or any other buildings, except such as were strictly required for the purposes of the fishery.

It was agreed in 1818, that the vessels belonging to the United States should have, in common with the British subjects, the privilege of catching fish on the southern coast, between Cape Ray and the Ramea Islands, and on the western and northern coasts, from Cape Ray to the Quirpon Islands; also on the shores of the Magdalen Islands, and on the coasts, bays, harbours, and creeks of Labrador, from Mount Joli through the Straits of Belle Isle, and thence northward, indefinitely along the coast as heretofore, but without prejudice to the exclusive rights of the Hudson's Bay Company. And they have also the liberty to dry and cure fish in any of the unsettled bays, harbours, and creeks, of the southern parts of Newfoundland and Labrador, but so long only as they shall remain unsettled.

BANKS OF NEWFOUNDLAND.—Eastward, as well as southward of the Island of Newfoundland, are several extensive *sand-banks*, abounding with fish of various kinds. In sounding, the bottom is commonly covered with great quantities of shells. The banks are frequented by shoals of small fish, most of which serve as food for the codfish, which thrive so amazingly, and are so inconceivably numerous, that although many hundreds of vessels have been annually supplied with them for more than two centuries, yet such a prodigious consumption has not apparently diminished their numbers. The fishery is not confined to the banks, but extends to the shores and harbours of Newfoundland, Nova Scotia, and Breton Island. The fish are commonly most abundant where the bottom is sandy, and the depth about 30 fathoms; where the bottom is of mud they are observed to be less numerous. In

winter they return to the

GREAT about lat. 4 defined; but ward, it n water. Th miles across the latitude fathoms, w the Virgin ward, than account of reported to 1845, in la suppose th in lat. 45° W.; here bank has 1 mediately the bank h is a depth fine sand, a bank, in lo in which a fetid smell cod, which fathoms, a or sand m bank is of and soundi this work.

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* In "Br mode of fish in the Nau † Or the of this work ‡ See Ap † It is ve 12 to 14 fee

winter they appear to retire to deep water, but in February, March, and April, they return to the banks, and fatten rapidly.*

GREAT BANK.—The Great Bank, south-eastward of the island, extends from about lat. 43° N. to $47^{\circ} 42'$ N. Its form, like that of the other banks, is not easily defined; but about the latitude of 45° , its breadth is nearly 5 degrees, whence, southward, it narrows almost to a point, and seems suddenly to drop into fathomless water. The north end, which is nearly in the latitude of Cape Spear, is about 60 miles across, and the depths on it vary from 45 to 48 fathoms, sand and shells. In the latitude of Cape Race, or in $46^{\circ} 40'$ N., and long. $47^{\circ} 30'$ W., soundings in 76 fathoms, whitish sand, will be obtained; this will be about 140 miles eastward of the Virgin Rocks. Although, in this parallel, the Great Bank extends farther eastward, than more to the southward, it cannot be considered safe to cross it here, on account of the rocky shoal of only 21 feet water, of about 100 or 200 feet in extent, reported to have been seen by Mr. Jesse Ryder, of the fishing schooner Bethel, in 1845, in lat. $46^{\circ} 30'$ and about 50 miles eastward of the Virgin Rocks. We will suppose that the St. Lawrence is being approached from the eastward; in that case, in lat. $45^{\circ} 30'$, soundings will be obtained on the edge of the bank in long. $48^{\circ} 45'$ W.; here the bank is very steep. In lat. 44° N. and long. 49° W., the edge of the bank has 105 fathoms upon it, bottom of very fine grey sparkling sand; but immediately westward of this position, the soundings decrease. Hence, the edge of the bank has a south-westerly direction to lat. 43° N. and long. $49^{\circ} 50'$ W., where is a depth of 60 fathoms, having immediately eastward shoal water of 40 fathoms, fine sand, shells, and mud, and westward, deep water. In the western part of the bank, in long. $52^{\circ} 30'$ W., is a deep gulley called *Trou de la Baleine* or *Whale Deep*, in which are soundings of 57 to 69 fathoms, on a bottom of mud or ooze having a fetid smell; this Deep abounds with different sorts of fish, but more particularly the cod, which are amazingly numerous. The depths of the Great Bank vary from 20 to 80 fathoms, and the bottom also varies considerably, but it generally consists of sand, or sand mixed with shells and gravel, rarely with stones. The eastern face of the bank is of clear whitish sand, and often sparkling. But the best idea of the shape and soundings of the bank will be gained by referring to the chart which accompanies this work.†

Virgin Rocks.—If the Great Bank be made between the 46° and 47° parallels of latitude, you must be very careful to avoid being drifted upon Cape Race or Virgin Rocks. These rocks have been surveyed by Captain Bishop, R.N., and Mr. Rose, R.N., and the following particulars are the result of their observations. The bank on which the Virgin Rocks are situated extends $4\frac{1}{4}$ miles in an E. by S. and W. by N. direction, and is $2\frac{3}{4}$ miles wide in its broadest part, the depths being regular from 28 to 30 fathoms. Beyond these limits, the depth increased suddenly to 39 and 43 fathoms. In the Nautical Magazine for 1832, p. 10, it is stated that "their meridian distance from Halifax was found to be $12^{\circ} 46' 6''$ E., and the longitude of the rocks depends on Halifax Dockyard, which is supposed to be in $63^{\circ} 38' 41''$ W."‡ Mr. Rose describes these rocks as extending in an irregular chain, or cluster, 800 yards in the direction of N.E. by E. and S.W. by W., their breadth varying from 200 to 300 yards. They were distinctly seen under water, particularly a large mass of white rock, in $4\frac{1}{2}$ fathoms,|| having 5 and $6\frac{1}{2}$ fathoms round it. The shoal was traced in 7 fathoms, on detached rocks, near the edge of it, having deeper water between them. On the southern edge of the shoal, from S.E. to West, the depth increases gradually to 30 fathoms, at the distance of half a mile from the shoalest part. The same depth was found N.W. and N.E. of the shoal, at the distance of one-third of a mile, and also between N.E. and S.E., at the distance of one mile. The current was found setting W.S.W., at the rate of one mile per hour over the shoal, with a confused cross swell.

* In "British America," by Mr. McGregor, vol. II., 1832, is given a copious description of the mode of fishing and curing in Newfoundland, as shown also, by a quotation from the same work, in the Nautical Magazine, June, 1832, p. 190.

† Or the reader may refer to the large chart of the banks, on two sheets, sold by the publishers of this work.

‡ See Appendix.

|| It is very generally asserted at St. John's, that there is one spot on these rocks which has only 12 to 14 feet water over it.

Shoals.—A shoal of 21 feet water was discovered, in 1845, by Mr. Jesse Ryder, of the fishing schooner *Bethel*, in lat. $46^{\circ} 30' N.$, which appeared to be a rock of 100 or 200 feet surface. He discovered it accidentally while searching for the 9-fathom bank, to fish upon, and supposed it to be about 50 miles to the eastward of the Virgin Rocks, and to bear S. by W. about $1\frac{1}{2}$ mile from the 9-fathom bank. Mr. Ryder was certain that it formed no part of the Virgin Rocks, having afterwards seen them.*

Captain Kewley, of *Galway*, reports a bank or shoal 4 or 5 miles to the S.W. of the Virgin Rocks. He states that he has seen the water break on the shoal, and that the spot is well-known to the fishermen as dangerous.

Westward of the Great Bank there is a series of banks, called the Green, St. Pierre, Mizen, Banquereau, Canso, and the extensive bank which surrounds Sable Island, and extends westward along the coast of Nova Scotia. All these have from 20 to 70 fathoms on them, and afford a good indication of a ship's approach to land.

FLEMISH CAP, called also the Outer or False Bank. This is a patch of rising ground eastward of the Great Bank, in long. $44^{\circ} 30' W.$ and between latitudes 47° and $48^{\circ} N.$ It has been partially surveyed by M. Lavaud, of the French Navy, from whose observations it appears to be very steep on the western edge, there being no bottom immediately after sounding in 130 or 150 fathoms on its edge. From long. $44^{\circ} 52' W.$ and lat. $46^{\circ} 53' N.$, in a depth of 73 fathoms, large stones, a line of soundings, gradually increasing in depth, was carried northward, to lat. $47^{\circ} 50' N.$ and long. $45^{\circ} 12' W.$, where the depth was found to be 147 fathoms, bottom of soft mud. Between it and the western edge of the Great Bank is much deeper water, on a bottom of fine sand and ooze, which will scarcely stick to the lead, and hence westward towards the Great Bank fine whitish sand, speckled black, will be met with.

PASSAGE TO NEWFOUNDLAND.—If bound to St. John's Harbour, it is advisable to keep on the parallel of 46° , or $1\frac{1}{2}^{\circ}$ to the southward of the parallel of that port, and until you approach the outer edge of the Great Bank, and obtain soundings in long. $48^{\circ} 30'$ or $49^{\circ} W.$, to steer directly to the north-westward for Cape Spear; but if bound for the Gulf of St. Lawrence, you should endeavour to cross the bank in $45^{\circ} 30'$, and when about in 55° or 56° of longitude, shape your course north-westerly for St. Paul's Island, or Cape North or Breton Island.

In thick weather the lead should be kept going when leaving the western edge of the Green Bank, to ascertain when you fall into the deep gully of 80 to 90 fathoms, mud, which runs N.N.E. and S.S.W., about 60 miles, between St. Pierre and the Green Bank. The middle of the gully is in lat. $45^{\circ} 35' N.$; by sounding in this gully, and feeling the edges of the banks on each side of it, you will obtain a fresh departure.

If making St. Pierre, adopt the following course, which is followed by the French fishing vessels. From the longitude of $52^{\circ} W.$, in lat. $45^{\circ} N.$, steer a N.W. course, which will carry you across the Green Bank in about 48 fathoms water, and when on the meridian of $55^{\circ} 10' W.$, in about $45^{\circ} 50' N.$, you will suddenly deepen your water to 90 fathoms. A farther run on the same course for about 10 miles, will carry you across this gully, when you will shoal your

* On the French charts of the banks, a shoal of 9 fathoms, seen by a Captain Bertel, in 1844, is stated to lie in lat. $44^{\circ} 43' N.$ and long. $49^{\circ} 51' W.$, but the position is somewhat uncertain. The words Bertel and Bethel (the name of Mr. Ryder's vessel) are not so unlike, but that they may have been confounded; in that case, the dangers may be the same, although they differ widely in latitude.

In September, 1856, we were favoured with a communication from Mr. A. Cruikshank (master of the brig *Anne*, of Sunderland), in which he says, "On my passage from Miramichi, on the 16th August, at 4 A.M., was surprised at the very light colour of the water, rather inclining to white. Took a cast of the lead; had 40 fathoms, broken shells. At 4h. 30m. the mate called me to see a place where the water was quite another colour. When I went on deck we were about 30 yards to leeward of it. It appeared to be a shoal of about 4 fathoms, and about 150 to 200 feet in circumference, in shape like a leg of mutton, the longest way trending N.E. and S.W. Lat. $46^{\circ} 38' N.$, long. $49^{\circ} 52' W.$ The water was smooth and clean all round, and on this place it was a dark dirty red. When we sounded, we were about a mile West (true) from the shoal. At the same place the current sets to the N.E. (by compass) one mile per hour."

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water to 35 and 30 fathoms; and after a farther run of 23 miles, may steer about N.N.E. directly for the island.

In the spring or summer, vessels from Great Britain should keep well to the northward; for it has been long observed that vessels from the Pentland Frith and the Clyde, have always made quicker passages than those from Bristol or the English Channel. During the winter season the American packets always keep well to the northward. The preferable course for vessels bound for the Bay of Fundy, in the summer, is to keep as far to the northward as lat. 47° , until reaching long. 40° W., then to edge away so as to cross the tail of the bank in about lat. $43^{\circ} 30'$ N. At this season of the year you will be more clear of the numerous fishing-vessels that resort to the banks, and perhaps fall in with less ice, but a strict look-out for the latter is always necessary. After being westward of the banks, endeavour to keep in lat. 43° , to avoid the northern edge of the Gulf Stream; but in the winter the bank should be crossed well to the northward to guard against the north-westers, which blow very heavily.

Two vessels bound to the lower ports in the St. Lawrence have been known to pass through the Pentland Frith together, in the month of April; the one had a passage of 21 days, and the other, the faster sailer, of 7 weeks. In comparing logs afterwards, it appeared that they were both in about long. 30° W. on the same day, but the one was about 100 miles to the southward, with a gale at West, while the other to the northward was running 9 knots, with a fresh gale at N.E. All the ships which kept to the northward had fine passages.

To these remarks on the passages from England to Newfoundland, the following, by a correspondent of the *Nautical Magazine*, 1833, p. 329, may prove not unacceptable.

"Although the voyage to and from North America, between the parallels of 60° and 40° , has always been attended with a degree of peril, from masses of ice which drift southward, during the summer months, from the polar regions, yet many an unwary mariner makes his run across the Atlantic without apprehension of meeting these floating dangers, or without sufficiently exercising proper discretion and vigilance to guard against collision with them. This is not mere conjecture, but the information of persons who annually perform the voyage, beside the result of my own observation, in accidents which have repeatedly occurred to vessels between Newfoundland and England, and in the number of missing ships on this route. Shipmasters should therefore bear in mind the imperative necessity there is for using their utmost vigilance and attention when crossing the above-named parallels, especially between the meridians of 30° and 60° West, to guard against contact with these formidable dangers of the ocean.

The *New York packet ships*, well supplied with every essential equipment, and elegantly fitted for the accommodation of passengers, when making their winter voyage from Liverpool, keep in high latitudes until near Newfoundland. This they do for the twofold object of avoiding the tempestuous weather so generally experienced to the southward, and of obtaining fairer winds; and thus, by slipping within the mighty stream from the Florida Channel, they evade its retarding influence. The voyage by this route is shortened; and, although bad weather must be expected, it is not so violent as farther south; besides which, the eastern current is avoided. I believe it is an unusual thing to meet with ice in this part of the Atlantic in the winter; but we have the following recent instance to the contrary, so that a look-out should be kept in that season, as well as in the summer, by vessels making the voyage.

It appears that the *Emulous* packet, on the 26th of February, 1833, met with much field-ice on the coast of Nova Scotia; and in the latitude of 43° N. and long. 49° W., those on board were much surprised by falling in with a large quantity of strongly packed ice, which reduced the vessel's way to $6\frac{1}{2}$ and 7 knots, from sailing at the rate of 9 knots, under close-reefed main-top-sail and reefed foresail. On the 4th of March, she fell in with three bergs, of large dimensions, in a run of 95 miles; and at nine the same evening she was obliged to pass between the two easternmost of these before heaving-to for the night; after which, by keeping a more northerly course, no more of these dangerous floating masses were seen.

From all accounts it seems that the greatest danger is to be apprehended in the vicinity of the Banks of Newfoundland; and this, as every navigator knows, is in-

creased by a dense fog which generally pervades the atmosphere in that quarter, and, of course, shortens the distance of vision to a very circumscribed limit."

PASSAGE THROUGH THE STRAIT OF BELLE ISLE.—Some discussion having previously arisen relative to the eligibility of the Strait of Belle Isle as a route to and from Quebec, a letter, containing the following remarks, by Captain Ballantine, appeared in the *Nautical Magazine* for 1861, page 475:—

"While I admit that the Belle Isle route ought to be avoided when there is a risk of field-ice being encountered in it, I feel confident that, at all other times, it is by far the safer route of the two.

Dangers arising from ice, from irregular currents, and from collision with other vessels are greatly multiplied by dense fogs; and in these respects the northern route has a great advantage over the southern one, for the fogs are seldom of long continuance in the north, while off Cape Race they form the general rule in the summer months.

At the lighthouse on Belle Isle in the six summer months of 1859 they experienced 1168 hours of fog. The average is about 8 days per month. A considerable portion of these fogs would be moderate, involving little risk in navigating through them. Moreover, as the island is high, the upper part of it is frequently enveloped in fog (and of course registered), while it is clear weather near the surface of the sea. I have frequently observed this; and Mr. Vaughan's, the lighthouse-keeper, published statements are to the same effect. I have no positive data as to the proportion of fogs to clear weather on the Grand Bank and in the vicinity of Cape Race; but my impression is, that fogs prevail there half of the time during the summer months. They certainly are very frequent, often of long continuance, and extending at times from 800 to 1000 miles, with scarcely a break in them.

The steamer *Anglo Saxon*, in the early part of July, got enveloped in a fog as she left the Gulf of St. Lawrence by the south route; and from there to 40° W. had not 4 hours of clear weather, having passed over a space of 900 miles. Both last year and the year before, at about the same season, dense fog was experienced on board of her in passing over that track, and her experience is no exceptional case.

Now, danger from icebergs can be, in a great measure, avoided by going slow or stopping altogether if the fog is very dense. But in the ice track, and that of many vessels at the same time, even extreme caution does not insure safety; for, by going dead slow or stopping altogether, to avoid Scylla you may fall into Charybdis, or rather Charybdis may fall into you, in the shape of a ship running into a steamer amidships, her weakest and most dangerous part. But icebergs won't run into a steamer if a steamer does not run into them. Danger from icebergs is much less than danger from other vessels in their vicinity.

There is, perhaps, not above a score of vessels pass to and from Europe by the Belle Isle route in the whole season. There are no fishermen outside the strait, and few inside, in the steamer's track. But by the southern route over the Grand Bank, they are very numerous, many of them of considerable size, with large crews on board for fishing purposes. Then a great proportion of the United States traffic, by steamers and sailing vessels, pass over that track, as well as the New Brunswick and Nova Scotia trade from Europe, and all the Gulf of St. Lawrence trade from Europe, less the few by Belle Isle.

The Quebec fleets alone average over 1000 vessels a season, and all these ships and steamers pass over this south track, which by usage is not very broad, and a portion of it is obstructed by field-ice in the early summer, and by icebergs throughout all the summer months.

The loss of the mail-steamer *Canadian* is referred to, and the Strait of Belle Isle blamed for it; but she was lost after passing through the strait in safety; and the same cause would have produced the same effect off Cape Race, viz., crushing her bilge in by falling heavily on heavy ice in a swell of the sea. And I have already shown there was field-ice abreast of Cape Race, and 300 miles east of it, on June 27, 23 days after the *Canadian* was lost on the northern route.

Danger arising from irregular currents is alike common to both routes. Freedom from danger arising from sailing in the vicinity of land is also in favour of the Belle Isle route, for the distance by that route is 226 miles less than by Cape Race, 125 of which is the coasting part of the passage. If some parts of the coast of Labrador are more dangerous than the south coast of Newfoundland, both are dangerous in

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thick weather, if too closely shaved. In clear weather there is danger in neither, and clear weather is much more prevalent on the Labrador coast than on the south coast of Newfoundland.

The strait of Belle Isle is only 80 miles long, it is some 10 miles broad at its narrowest part; the passage is free from rocks, except one or two close to the shore. There are soundings throughout, and in many parts a vessel can anchor if necessary. There are also several harbours in the strait: Forteau Bay, a spacious one. There are first-rate lights at each end. The Canadian Government are about to erect another on Cape Whittle, the worst part of the Labrador coast.

If the strait be attempted too early there is a risk of more field-ice being met with outside Belle Isle on the north route than on the south one, and this is the only real advantage that the south route has over the north one, in my opinion. For although the icebergs are more numerous north than south, there is little risk incurred when a steamer can go slowly in a fog without any danger from other vessels. In 1857, the strait was clear of field-ice on April 9; in 1858, on June 10; in 1859, on 12th May; for 1860 I have no data at hand; this year it was after June 4, and it was in considerable quantities 150 miles east of Belle Isle on July 5; I am not aware if any has been seen since. But this is an exceptional bad year for ice both north and south, the worst since 1856.

Lieut. Ashe seeing icebergs near Belle Isle on Aug. 7, is not a sufficient reason for the passage of the strait being avoided until September, for icebergs do not block the way as field-ice frequently does, and by waiting until June is over, the risk of encountering field-ice is very small indeed. We might as well avoid going south of Cape Race, for there will be icebergs on that route in a season like this until the end of September. Even as a general rule, icebergs are encountered on both routes throughout the summer and autumn months."

Admiral Bayfield, however, in the same magazine, page 511, writes as follows:—

"I was consulted years ago respecting the passage through the strait of Belle Isle, and gave my decided opinion that the advantage of a few miles less distance from Liverpool to Quebec was not a sufficient compensation for the danger of passing through a strait 65 miles long, and in its narrowest part only 9 miles wide, and which *may* be full of icebergs *at any season of the year*. In August, 1833, I counted no less than 200 bergs and large pieces of ice in the strait. In the following year 6 or 7 large bergs were all that could be seen in the same month. I once found the western entrance of the strait to freeze across in a calm night on June 20th, which will give you some idea of the climate. Of course, it was only a very thin covering of ice, which disappeared soon after sunrise. The main entrance of the Gulf, between Cape Breton and Newfoundland, is free from ice, excepting in the spring of the year.

As to the proper time of passing the strait, I think the fall of the year—after the middle of August—the least dangerous, because then northerly winds, attended with clear weather and smooth water, are more frequent; whereas in June, July, and the early part of August, southerly and easterly winds and fog prevail, and render the ice far more dangerous."

FOGS.—The Banks are frequently enveloped in dense fogs, which, from the middle of spring to December, have been known to last 8 and 10 days successively; at such times they are often so thick that it is scarcely possible to see an object 10 fathoms distant; a continual drizzling rain is dropping from the sails and rigging, a general calm prevails, and sometimes attended with a considerable swell of the sea, so that there is constant fear of running foul of some vessels, or of being drifted by the currents upon some danger. The currents which surround Newfoundland are frequently so violent and irregular, sometimes tending towards the shore and sometimes towards the sea, that the greatest caution will always be found necessary; while the current coming from the northern regions sweeps along the shores of Labrador, and, in the spring, detaches immense icebergs, which float southward, and become exceedingly dangerous, especially in foggy weather; some of these masses will frequently be grounded in 40 or 50 fathoms water, and others will be met with farther out to seaward, at the distance of 125 or 130 leagues from the land. Fortunately these formidable objects may generally be discovered, even in dark weather, by a white and bright appearance of the sky above them, and also by the roar of the waters breaking against them; they also may be apprehended by the intense coldness

they diffuse to a great distance around them; they continue and are usually met with as late as June, July, and August. Your approach towards the Banks may be known by the numerous sea fowls which will attend you, as roches, malimauks, and divers; these latter are seldom found more than 30 leagues off the Banks, but malimauks and others are occasionally seen all across the Atlantic, but in the vicinity of the Banks they become numerous. The great fishery commences in May and continues till the latter end of September.

CURRENTS, &c.—It has been observed that vessels bound to the gulf of St. Lawrence should take the greatest care to notice the currents, which set from the eastward, all along the southern coast of Newfoundland, with frequently fatal velocity, causing an impetuous indraught into the various bays, and occasionally the loss of many lives, and the wreck of numerous vessels. These local currents chiefly prevail on that part between Cape Race and Cape Ray. The British frigate *Tweed*, the sloop *Comus*, the transport *Harpooner*, were all, of late years, lost on this coast; the two latter nearly on the same spot, and within three weeks of each other. H.M. ship *Drake*, in June, 1822, was wrecked about the eastern head of St. Shot's Bay; and in the July following the brig *Spence* was totally lost on or near the same spot: so that it would seem that more vessels have been cast away on the small point of land which divides the two bays of Trepassey and St. Mary, than on any other part of the island;—that these accidents were occasioned by the currents, there can be little doubt.

It frequently happens that a ship-master bound from England to Quebec will strike soundings on the Great Bank of Newfoundland, and thence shape a course for the gulf of St. Lawrence, without ever seeing the land, which, probably, is enveloped in fog. When unable or neglecting to make a proper allowance for the above current, which runs sometimes at the rate of 4 miles an hour, he is swept away to the westward; and while he considers himself to be steering fairly for the entrance of the gulf, he is driven on shore, and his vessel becomes a wreck.

An able navigator, 20 years employed in the fisheries, and who is a native of Newfoundland, has observed,—“It is well understood by all the boat-masters, that there is, in general, a strong current setting in from the eastward, along the western coast of Newfoundland, which, after passing Cape Pine, runs more towards St. Mary's and Placentia Bays. This current will be felt at least 20 leagues to the south-westward of Cape Pine, and becomes more rapid as you approach the land, its velocity increasing as the winds favour its direction; but at all times of sufficient magnitude to endanger the safety of any vessel approaching from the south or west, in foggy weather, and being ignorant of its existence.

In order to avoid the danger arising from this current, the fishermen, in foggy weather, when returning from the western coast to their homes on the eastern shore, invariably use the lead, depending more upon the depth of water than their compass, and always keeping a sufficient distance from the land, to ensure the safety of the vessel. On passing eastward of Cape Race, they never approach nearer to the land than 35 fathoms water; the ground being more of an inclined plane on the west than on the east coast. That depth of water will be found at a considerable distance from the land. The ground soon becomes more broken, and the depth of water increases so fast, that in the course from Cape St. Mary, to avoid Cape Race, you will, when eastward of it, find yourself in 50 fathoms, and when advanced a very short distance farther, will sound in 60 and 70 fathoms; consequently, the land will then be cleared, and you may safely pursue what course you think proper; but, in all this navigation, the mariner's safety will, in a great measure, depend upon a due attention to the lead.”

The winds being variable, there is little doubt but that they produce many changes in the currents; shifts of wind southward of the island being so common that it frequently, after blowing a gale from one point, suddenly shifts to the opposite, continuing to blow with the same violence. One vessel may thus be lying-to with a heavy gale, while another 30 leagues distant may be in a similar situation with the wind in quite an opposite direction, a circumstance that has been known to happen.

We annex to these remarks upon the currents the following from the French chart of the Banks, by M. Lavaud of the French Navy:—

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to the Great Bank, varies little from E.S.E. to S.S.E. (true), and is generally between these points; its velocity is seldom less than 8 to 10 miles in the 24 hours, and sometimes increases to 24 or 30 miles. Mariners should observe, that outside all the Banks, and especially off the south part of the Great Bank, the currents boil and form such strong eddies, that a vessel becalmed, or with light winds, cannot estimate her position with exactness; this is probably occasioned by the edge of the Gulf Stream.

The currents on the Great Bank have a variable direction, of which the wind is not the only cause, as it is, at times, in a different direction. The fishermen state, that the current every day makes the round of the compass; and it is found, by close observation, that beyond the meridian of Cape Race it is mostly to the westward."

Mr. R. Bursell, of St. John's, Newfoundland, in a letter to the *Mercantile Magazine*, in 1860, makes the following observations on the currents in the strait of Belle Isle, and on the south-west and south coasts of Newfoundland:—

"From Cape Bauld to Cape Norman, at the entrance to the *Strait of Belle Isle*, there is a current at times setting to the eastward, notwithstanding that the arrows on the charts indicate a general set to the westward. After passing Cape Norman, being a few miles to the north-west of it, the yacht (the Bishop of Newfoundland's) was carried, in the course of 12 hours (August), during a dead calm, as far as Forteau Bay; we passed the icebergs in the strait as if going $2\frac{1}{2}$ knots per hour: it is a wonder more vessels are not lost in these parts, considering the foggy state of the atmosphere, the numerous icebergs aground and afloat, and the uncertain strength and direction of the currents.

In beating up the gulf of St. Lawrence, from Blanc Sablon to the Meccattinas, it is best to work up on the Labrador shore, as the tide sets strongly down the gulf on the Newfoundland shore: I have proved both.

Leaving Cod Roy and bound round Cape Ray to the southward, I found the current very variable. I was becalmed 9 miles off *Cape Ray* the whole of one day, and was carried to the north-west at the same time that a schooner, also becalmed, but more in-shore, was taken to the southward out of sight; the next day, hauling in, I could not make headway to the southward in her track with two knots of a fair wind. The fishermen told me that, within 3 or 4 miles of the land, the currents hereabout are very uncertain, setting for days alongshore in one direction, and then suddenly changing to an opposite course; at the same time, in the offing, there is a constant set to the S.W. Along the whole line of coast to Cape Race, I found the current not only strong but irregular.

On the north side of *Fortune Bay* the current sets strongly to the westward; on the south side it sets as strongly to the eastward.

From *Point May* past the Lamalin Islands to St. Lawrence Harbour, the current is not only irregular, but there are breakers in many places fully 3 miles off-shore; in the channel between the Lamalins and St. Pierre Island, and thence to Miquelon Island, it is impossible to rely on its direction, it varies so greatly; on this account accidents frequently occur."

WINDS.—On the east and south coast of the island of Newfoundland the winds most generally found are from South, from May till October. They are, however, very changeable, and generally moderate during this period. Nevertheless, there are occasional squalls from S.E., with rain and fog, which latter is especially prevalent in July and August. The N.W. winds which sometimes blow are dry and cold, and generally attended with a clear sky. In October these winds become violent. S.W. winds are also found here, but very variable in force at all times of the year.

According to some observers, the winds in Canada are said to blow regularly from the northward during the five winter months; but, according to others, N.E. and S.W. winds prevail alternately; the former at the end of autumn and during winter, the latter during the remainder of the year. From December to April the weather is generally serene; the occasional N.W. winds which blow at this period are colder than those from N.E., and are common while the ice lasts; they are only met with at sea in these regions about the month of March; they increase in June, and afterwards gradually diminish. In 1834 the winds, as observed in Lower Canada, were as follows:—

In January—W.N.W., weather generally fine; February—West and E.N.E., with much snow; March—West and East, with snow and rain; April—variable, generally

fine; May—variable, generally fine; June—variable, generally fine; July—variable, generally fine; August—variable, generally fine; September—variable, with rain and cloudy weather; October—E.N.E., with snow and rain; November—S.S.E., snow; and in December—W.N.W., weather variable.

ICE.—The following remarks upon ice in the North Atlantic by Mr. W. C. Redfield, although perhaps not immediately connected with our subject, are added, as they cannot but prove interesting to the reader:—

"Of the various dangers which beset the path of the mariner, perhaps there are none which excite to more vigilance than the known or expected proximity of ice. In some frequented portions of the Atlantic Ocean the ice appears almost every year, in the various forms of field-ice, floes, and massive ice-islands, drifted from the arctic regions by the constant action of the polar currents. These ice-bearing currents, in flowing towards the South, must necessarily incline towards the western limits of the ocean, owing to the increased velocity of the diurnal rotation of the earth's surface as we depart from the poles; a law well understood as regards the currents of *air* which form the trade winds. Hence it is that on and near the banks these ice currents are found to cross the usual track of vessels bound from the ports of Europe to North America.

The quantity of ice which appears on this route of navigation in different years, is exceedingly various. It is sometimes seen as early in the year as January, and seldom later than the month of August. From March to July is its most common season. It is found most frequently west of long. 44° and eastward of long. 52° ; but icebergs are sometimes met with as far eastward as long. 40° , and in some rare cases even still further towards Europe.

Experience has shown that the proximity of ice is far less hazardous than rocks or shoals; and this floating danger would be still less formidable were it not for the fogs and mists which it often causes. The *thermometer* has been often held up as affording sure indications of an approach to ice, by the reduction of temperature shown both in the air and water, and these indications are important and should by no means be neglected. But there may be many cases of approach to ice where a reliance upon the thermometer alone could not afford security.

Although little or no ice be seen in one passage, or even in many times crossing the Atlantic, yet it has been frequently met in such quantities as seemed to indicate a vast or indefinite extension of the ice-fields, towards the polar seas."

EAST COAST OF NEWFOUNDLAND.

CAPE RACE TO CAPE ST. FRANCIS.

CAPE RACE,* the south-east point of Newfoundland, lies in latitude $46^{\circ} 39' 12''$ N. and longitude $53^{\circ} 2' 38''$ W., and is a table land of moderate height. A black rock lies near it, and several smaller ones around it. This important land-fall may now be distinguished by a beacon and a lighthouse upon it; the latter consists of a circular structure of iron, rising from the centre of the keeper's dwelling to a height of 50 feet above the ground, and painted in red and white vertical stripes so as to be the easier made out in foggy weather; it stands at 35 yards westward of the old

* A correspondent informs us of the existence of a series of banks, extending from Cape Race to the northward of the entrance of St. John's, at a distance of from 9 to 11 miles from the coast, the soundings over them ranging from 28 to 50 fathoms, and says that they are named by the fishermen the "Bantams." Banks of such importance to vessels approaching the east coast of Newfoundland, cannot be long before they undergo a thorough examination, when these particulars will, doubtless, be brought out in detail; but in the meanwhile any information relating thereto will be of service to ships making for St. John's or Cape Race, and should at once be made public.

Mr. Bursell, whom we have before quoted, observes that, "Off Cape Race, about 5 miles distant in an E.S.E. direction, a bank (*New Bank*), with only 17 to 20 fathoms water on it, is marked on the charts. There is a general idea among the fishermen, that this bank runs to the northward of the Bay of Bulls: it may be that there are patches only, as I know that a few miles out seaward, opposite Fermouse Harbour, there is a bank called the 'Bantams,' which is esteemed good fishing ground."

July—variable, ble, with rain mber—S.S.E., V. C. Redfield, d, as they can- naps there are imity of ice. almost every ifted from the p-bearing cur- the western tation of the s regards the ear the banks om the ports

From Cape Race to Cape Ballard, the course is N.E. by E. 8 miles; nearly one mile to the southward of Cape Ballard, is a high black head, called Chain Cove Head; between the points is a cove. To the westward of Chain Cove Head lies Chain Cove, before which lies a black rock above water. Nearly midway between Capes Race and Ballard is Glan or Clam Cove, a place only fit for boats.

About 8 miles E.S.E. from Cape Race, and to the southward of Cape Ballard, is a fishing bank, called New Bank, about 5 miles long, and nearly 2 miles broad; on it there are from 17 to 25 fathoms water.

RENEWES.—At the distance of $6\frac{1}{2}$ miles N.E. $\frac{1}{2}$ E. from Cape Ballard lie some small rocks, bold-to, named the Renewes, which are of moderate height, and lie one mile from the mainland. About 2 miles to the northward of these rocks, and about a mile to the southward of the entrance of Renewes Harbour, lies Renewes Island, which is situated close to the main land. The Harbour of Renewes is but a small indifferent place, and has not above 15 or 16 feet at low water. There are several rocks in the entrance, and the south-east winds heave in a very great sea. To sail in, you must keep the north shore on board.

FERMOUSE.—At about $2\frac{3}{4}$ miles northward from Renewes Harbour, there is an inlet named Fermouse, and between them is a creek called Bear's Cove, off which is a sunken rock at about a cable's length from the shore. Fermouse is an excellent harbour, and there is no danger in sailing into it, though the entrance is not more than a cable's length wide. Just within the entrance, on the north shore, is a small cove, in which a fishery is carried on, but there is no safe place for anchoring. At about a quarter of a mile farther in, on the same side, is another cove, named Admiral, in which merchant-vessels generally ride in 7 or 8 fathoms water, land-locked. About a mile farther up the harbour is a place named Vice-Admiral's Cove, on the south of which is the best anchorage for large ships, in 12 or 15 fathoms water, muddy ground, as thence wood and water can be conveniently obtained. Farther up on the same side, is Sheep's Head Cove, directly off which, near the middle of the channel, there is a shoal of only 9 feet water; this is the only known danger in the harbour.

About N.E. by E. one mile from Fermouse Harbour is Bald Head, and one mile farther N. by E. is Black Head.

AQUAFORT HARBOUR is about a mile N. by W. from Black Head, and has in its entrance a high rock above water, northward of which is the passage in, in which is a depth of 15 fathoms water. The harbour runs westward about 3 miles, narrowing as you advance, until about half a mile from the head of the bay, where it becomes much contracted, affording however about 4 fathoms water. Just within the narrows is a small cove of about 7 fathoms water, which is considered to be a good place for vessels to heave down, the shore being steep. To sail through the narrows, give a berth to the stony beach on the north shore, without the narrows, it being shoal, excepting at the point of the narrows where it is bold-to.

FERRYLAND HARBOUR.—Ferryland Head lies E. $\frac{1}{2}$ S. distant 2 miles from Aquafort, and N.E. $\frac{1}{2}$ E., $3\frac{3}{4}$ miles from Fermouse. It is moderately high, having, close off it, two high rocks above water, named the Hare's Ears. The head is not easily distinguished, on account of the main land within it being much higher. The entrance into Ferryland Harbour lies northward of the head, between it and Bois Isle, and is little more than half a cable's length wide; but after you are within Bois Isle it is much wider and affords tolerable good anchorage in 8 or 10 fathoms water;

* The New York and Newfoundland Telegraph Company's lines extend to Cape Race, where they have a station. Steamers making that point, bound eastward, are promptly reported to New York, free of charge, and, when practicable, the latest American news are put on board. Steamers bound westward, when within practical distance, are boarded by the news-boat, and their advices at once telegraphed to all parts of America. The news-boat carries a red flag, with a black ball in the centre. The American ensign hoisted on the Telegraph building, near the lighthouse, signifies that the steamer is recognised, and that a boat is coming out. Passengers who put private messages into the boat, may rely on their going forward.

but the north-east winds heave in a very great sea over the low rocks that extend from the Bois Isle to the main.

From Bois Isle to Goose Island, the course is N.E. by N. $\frac{1}{4}$ N. half a mile; and from Goose Island to Stone Island, N. 5° W. half a mile.

CAPLIN BAY runs in N.W. by N. $2\frac{1}{2}$ miles from Goose Island, and is considered to be a tolerably good harbour; there is a safe passage into it on both sides of Goose Island. Northward of Goose Island, between it and Stone Island, there is no known danger, the islands being bold-to. If you pass southward of Goose Island, between it and Bois Isle, be sure to keep the point of Ferryland Head open eastward of Bois Isle, in order to avoid a sunken rock, on which there are only 2 fathoms water, lying nearly midway between Goose Island and Cold East Point; after you are within this rock, there is, we think, no danger in sailing up the bay. The best anchorage is abreast of a cove on the port hand, about half a mile within Scogin's Head, in 16 or 17 fathoms water.

From Ferryland Head to Cape Broyle, the bearing is N.N.E., and distance $2\frac{1}{4}$ miles; this cape is a high table land, and makes in the form of a saddle, when seen either from the northward or southward. At about $\frac{3}{4}$ of a mile southward from the north part of the cape there is a small rock, called Old Harry, on which are only 3 fathoms water; but between it and the main are upwards of 20 fathoms water. About three-quarters of a mile E.N.E. from Cape Broyle there is a ledge of rocks, called the Horse Rocks, on which are from 7 to 14 fathoms water; in bad weather the sea breaks very high on these rocks; the mark for these rocks is, or was, a white house on Ferryland Downs open with Stone Islands: the Head of Cape Broyle Harbour open will also carry you directly upon them.

CAPE BROYLE HARBOUR.—From the north part of Cape Broyle to the south part of Brigus Head, the distance is $1\frac{1}{2}$ mile; these points form the entrance into Cape Broyle Harbour, which runs westward about 4 miles. At nearly $1\frac{1}{4}$ mile within the entrance on the north shore is a cove, called Admiral's Cove, in which is anchorage in about 12 fathoms water, good ground, but exposed to the south-east; the best anchorage is above the Narrows, in about 7 fathoms water; the only danger in sailing up the harbour is a ledge, called Saturday's Ledge, which lies about $1\frac{1}{2}$ cables' length without the Narrows on the north shore. If entering from the northward, keep the saddle on Brigus Head open with the point of Admiral's Cove, as it will carry you clear of this ledge. After you are above the Narrows, anchor in about 7 fathoms water, good ground, where you will be conveniently situated for obtaining wood and water.

Immediately northward of Brigus Head there is a small cove of the same name, which is only fit for boats.

Cape Neddick lies $4\frac{1}{2}$ miles from Cape Broyle, and $7\frac{1}{4}$ miles from the Hare's Ears off Ferryland: it is a table land, of moderate height, and steep towards the sea. From Cape Neddick to Baleine Point, the distance is $1\frac{1}{2}$ miles. Baleine Cove is about one quarter of a mile northward of Baleine Point, and is but a small place, fit only for boats. From Cape Neddick to the outer point of Great Island, the course is N.E. by E. $\frac{1}{2}$ E., distance $2\frac{1}{2}$ miles. This island is about half a mile in length, and of moderate height.

From Baleine Head to Spear Isle, the bearing is N.N.E. $\frac{1}{2}$ E., and distance 1 mile. Within this island a fishery is carried on, but there is no safe anchorage, the bottom being rocky. Toad's Cove is about a mile northward of Spear Isle, and only fit for boats. About $1\frac{1}{2}$ miles from Spear Isle, is the south point of Momables Bay, called Tinker's Point; from which to the north point of the said bay, being the south point of Witless Bay, the distance is about $1\frac{3}{4}$ miles. Momables is an open bay, about one mile deep.

Green Island is a small round island, about three-quarters of a mile from the south point of Witless Bay. From this point a ledge of rocks extends about one-third of the distance over to Green Island.

The south point of Gull Island lies about three-quarters of a mile northward of Green Island. The island is about one mile long, and a quarter of a mile broad, and is moderately high land.

WITLESS BAY extends inwards about 2 miles from Gull Island, and has a moderate depth of water, on good ground, but open to the sea. About half-way up on the north shore, there is a ledge of rocks, partly above water about half-tide.

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BAY OF BULLS.—At $1\frac{1}{4}$ miles northward from Gull Island is the south point of the entrance into the Bay of Bulls; from this point to the north point of the bay, called Bull Head, the course is N.E. by E., distance $1\frac{1}{4}$ miles. The best anchorage for large vessels is about half a mile from the head, in about 14 fathoms water, but small vessels may anchor higher up, and moor to the north shore, where they will lie land-locked. The only dangers are a small rock off Bread-and-Cheese Point, but not above twenty yards off, and a rock, on which are 9 feet water, lying off Margoty Cove, at about half a cable's length from the shore.

From Bull's Head to the south point of Petty (Petit) Harbour, from which a reef extends about a quarter of a mile, the course is nearly N.E. $\frac{1}{4}$ E. about $8\frac{1}{4}$ miles. The south point of Petty Harbour is distant from the north point $2\frac{1}{2}$ miles; between is the bay running in 2 miles, and having at the bottom of it a cove and fishery. About midway between the Bay of Bulls and Little Bay is a cavern, having an opening at the summit, through which the water spouts whenever the sea runs high, thus presenting a remarkable object, visible a considerable distance off; it is hence called the Spout.

CAPE SPEAR.—From the north point of Petty Harbour to Cape Spear, the course is N.E. $\frac{1}{4}$ E., distance $2\frac{1}{4}$ miles. This point is rather low and ragged, and may be known by the land north of it trending away to the N.W. Cape Spear, the easternmost point of Newfoundland, is estimated to be in lat. $47^{\circ} 30' 20''$ N., and long. $52^{\circ} 36' 40''$ W., and is the point for which vessels bound from the eastward for St. John's generally steer upon getting into soundings.

The lighthouse on Cape Spear is 38 feet high, and coloured red and white horizontally; it exhibits a light at 275 feet above the level of the sea, revolving every minute, which in clear weather may be seen at a distance of about 30 miles.

Between Cape Spear and the entrance to St. John's there are three bays, namely, Cape Bay, lying between Cape Spear and Black Head; Deadman's Bay, between Black Head and Small Point; and Freshwater Bay, between Small Point and Fort Amherst.

ST. JOHN'S.*—The city of St. John's is the capital of the island, and the seat of government. Although its approach is narrow, the harbour is excellent, and its situation readily known, both by the block-house on Signal Hill, at the north side, and Fort Amherst, on its south side, or point of entrance. A fixed light is shown from the top of the light-keeper's dwelling at Fort Amherst, at 110 feet above the level of the sea, visible about 12 miles. The channel, from point to point, is only about one-sixth of a mile wide; but it is wider just within the points than between them, decreasing again as you approach the Chain Rock, for, from the latter to the Pancake Rock, the distance is only 95 fathoms; these rocks both being above water and steep-to: Chain is the northern rock, and Pancake Rock lies on the south side of the channel. Three small knolls lie within 25 fathoms southward of the Chain Rock, with from 18 to 24 feet on them, the shoalest and outermost of which is named the Ruby.†

* The *pilotage* of vessels in and out of St. John's, is:—

For vessels under 80 tons N.M. (new measurement), or 100 tons O.M. (old measurement), £2; from 80 to 130 N.M., £2 10s.; from 130 to 180 N.M., or from 150 to 200 O.M., £3; from 180 to 230 N.M., or from 200 to 250 O.M., £3 5s.; from 230 to 300 N.M., or from 250 to 300 O.M., £3 10s.; from 300 tons and upwards, £4; for any of H.M. ships under sixth rate, £2 10s.; for those of fourth, fifth, and sixth rates, £3 10s.; for ships of the line, first, second, and third rates, £5.

All coasting vessels which may take pilots, are to pay one-half of the above rates, in proportion to their tonnage.

The *light-dues* for Newfoundland are 1s. per ton on all vessels (except coasting, sealing, or fishing vessels, registered in this colony) entering any port or harbour; but are not levied more than once in any year. On sealing and coasting vessels, the charge is 6d. per ton on registered vessels of 40 tons and upwards; vessels less than 40 tons pay 15s. per annum. No greater sum than £25 can be levied in any year for light-dues on any steamer or vessel entering any port of the colony. No steamer plying between Europe and any part of North America, and entering any port of Newfoundland as a port of call, is liable to pay light-dues, or other port-charges, except pilotage.

† In the annual report (1860) of the Chamber of Commerce of St. John's, it is stated that "the Chamber refers with much gratification to the operations now in progress for the removal of the Merlin and Ruby Rocks from the Narrows, so far as this becomes necessary for the safe entrance of the largest ships into this port; and the Chamber has every reason to believe that in a very short time this very desirable undertaking will be most perfectly accomplished."

About 50 fathoms farther in, and nearly in the middle of the channel, lies the Merlin Rock; but it is not so dangerous as formerly, the crown of the rock having been blown away, so that there are now 25 feet over it at low water.

When approaching the harbour of St. John's with a large ship, care must be taken to avoid the Vestal Rock, which lies about 50 fathoms off the southern, or Fort Amherst Point; over this rock are 18 feet water: the mark for it is Fort William, or the old garrison, just open of the South Head; Wash-ball Rocks lie close to the northern point of the harbour, and are always above water, being steep-to, and therefore not dangerous. The course in is N.W. $\frac{1}{4}$ W., the shore continuing bold until you get near to the Pancake, then give the south side a small berth; continue the same course, or rather more inclined to the westward, keeping Fort Amherst flag-staff open to the northward of Frederick's Battery flag-staff; you will, by these means, avoid the Prosser, a rock on the port side, running off the end of another rock, formed like a saddle, with 18 feet water in the hollow, and only 5 feet on its outside; yet it is steep-to, having not less than 5 fathoms close to it. As soon as you are within, and have passed the Prosser Rock, you may steer up as you please, both shores being clear of dangers, and anchor in from 4 to 10 fathoms water, on a bottom of mud, and lying quite land-locked.

The winds from the S.W. to the southward, as far as N.E. by E., blow in; all other directions of the wind either baffle or blow out of the Narrows; with the latter winds you must warp in, for the convenience of doing which rings are fixed in the rocks on each side. The anchorage within the Narrows has from 10 to 16 fathoms, and a little before you enter the Narrows there are 20 fathoms.

Spring tides rise 7, neaps about 5 feet, but very irregular, being much influenced by the winds. It is high water, F. and C., at about 7h. 30m.

The town of St. John is composed of one long street, running nearly parallel to the shore, and of several shorter streets or lanes which branch from the main street at right angles. Most of the houses are of wood, but some are of brick, and others of stone. The shore is entirely lined with wharves, which are mostly occupied by stages for curing fish. The government has a fine wide wharf, which is open to the public. The population of the town fluctuates extremely with the season. At the height of the fishing the place is crowded, but many of its then inhabitants return to Europe in the trading vessels. St. John's is built on a peninsula, which Lord Baltimore named the province of Avalon. The entrance to the harbour is guarded by various batteries, and formerly a chain was extended from the Chain Rock (hence its name), to prevent the entrance of a hostile force.

A stranger to the coast should be careful not to mistake *Quiddy Viddy*, a small place, fit only for boats, lying about a mile to the northward of St. John's, for St. John's itself, as at a distance it has the appearance of a good harbour. Observe, that at Quiddy Viddy's south side is a round hill, shaped like a haycock, standing upon Cuckold's Head; while St. John's Harbour may be distinguished by Fort Amherst, which appears white, and by the flag-staves on the hill, over the north point of entrance, which sufficiently denote the right entrance.

About a mile from Cuckold's Point is a small point or projection of the land; and 2 miles farther is Sugar-Loaf Point, tapering upward, and much resembling a sugar-loaf. One league farther is Red Head, having a small place called Logy Bay between.

TORBAY.—At $1\frac{1}{2}$ mile northward from Red Head is the south point of Tor Bay, which is somewhat lower than the others in its vicinity. From this point to Green Cove, the customary place where vessels anchor, the course is about W.N.W. 2 miles, where you may ride in 14 and 12 fathoms, but much exposed to seaward. This bay is large, being fully a league in extent. Immediately off its northern point is a flat rock, where the sea breaks. A heavy swell sets from the eastward into the bay, so that it is not a good place to lie in.

From Flat Rock Point, which is low, dark land, the coast runs northerly 4 miles to Black Head, and then 3 miles to Cape St. Francis.

CAPE ST. FRANCIS.—Cape St. Francis has a white appearance, and is low, but behind it the land rises high. A little south of the Cape is Shoe Cove, a place frequented in bad weather for splitting and salting fish. Off the Cove there is good fishing, and with northerly, westerly, and southerly winds, vessels will lie safely within the cove.

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At about $1\frac{1}{2}$ mile eastward from Cape St. Francis, there are some sunken rocks, called the Brandy Rocks, on which the sea generally breaks. The channel between them and the cape is too dangerous to be made use of, while the rocks add to the safety of Shoe Cove. Another small cove northward of the cape may be used with the wind off-shore.

FROM CAPE ST. FRANCIS TO BOCALIEU ISLAND.

CONCEPTION BAY.—From Cape St. Francis, the southern point of Conception Bay, to Bocalieu Island, the northern boundary of the entrance, the course and distance is N.N.E. $\frac{1}{2}$ E. about 17 miles. This bay is very extensive, running to the south-westward, and contains many smaller bays and inlets, of which we proceed to give a more minute description.

BELL ISLE.—At 11 miles S.W. by W. $\frac{1}{2}$ W. from Cape St. Francis is a lofty island named Bell Isle, which is $5\frac{1}{2}$ miles in length, and about 2 miles wide. Its eastern side is nearly 3 miles off the main, and there is on this side a beach, to the southward of which is good anchorage in 30 fathoms, sandy ground: a league farther, near the south part of the island, is also tolerable anchorage in from 15 to 30 fathoms. At the south end of the island is a small cove, named Lance Cove, where fishing craft occasionally resort, and find good shelter for 5 or 6 vessels. One mile from the south part of the island lies a rock, over which are 3 fathoms water. Two miles to the southward of Lance Cove, is a small, low island, named Little Bell Isle, having to the W.S.W. of it, distant $1\frac{1}{2}$ mile, Kelly's Island, of middling height, and about three-quarters of a mile in length. On the main, within Bell Isle, is Portugal Cove, in which there is no safe anchorage. Broad Cove lies to the southward of Portugal Cove, and at the bottom of the bay is Holyrood Harbour, which runs in about $3\frac{1}{2}$ miles, and where, in a cove on the west side near the head, is very good anchorage in 10 or 12 fathoms water, and sufficient room to moor.

At $1\frac{1}{2}$ mile distant from Holyrood Harbour is Harbour Main, about half a mile wide and $1\frac{1}{2}$ mile deep, having anchorage near the head in 7 to 10 fathoms water, but it is entirely open.

SALMON COVE.—Salmon Cove lies about a mile to the westward of Harbour Main. The entrance to it is about a mile wide, and runs to the W.S.W. about $2\frac{1}{2}$ miles, then dividing into two arms, one running to the westward one mile nearly, and the other to the southward $1\frac{1}{2}$ mile. In either of these arms there is very good anchorage, but the best is in the southern arm in from 5 to 10 fathoms water, there being no danger in going into it. To sail into the western arm, keep a rock above water off the point on the port hand, going in, well on board, in order to avoid a sunken rock that lies nearly opposite, a small distance from the starboard shore; there is a passage on either side of this rock, but the southern is by far the widest.

COLLIER'S BAY.—About a league to the westward of Salmon Cove lies Collier's Bay, which runs in nearly 2 leagues. About $1\frac{1}{2}$ mile from the entrance there is a sunken rock near mid-channel, on either side of which is a safe passage up the bay; this rock shows at three-quarters ebb. At $2\frac{1}{2}$ miles from the entrance, on the east side, is anchorage in about 10 fathoms water before a cove: small vessels may haul into the cove, and lie in 3 or 4 fathoms water, and moor to the shores. About $1\frac{1}{2}$ mile higher up, on the same side, is another cove, but there is no anchorage in it, being shoal and full of sunken rocks. Near the head of the bay is very good anchorage in 9 or 10 fathoms water.

BRIGUS BAY.—About 2 miles to the northward of Collier's Bay is situated Brigus

* It is a fact worthy of notice, that the whole of the land in and about the neighbourhood of Conception Bay, very probably the whole island, is rising out of the ocean at a rate which promises, at no very distant day, materially to affect, if not to render useless, many of the best harbours we have now on the coast. At Portgrave a series of observations have been made, which undeniably prove the rapid displacement of the sea level in that vicinity. Several large flat rocks, over which schooners might pass some thirty or forty years ago, with the greatest facility, are now approaching the surface, the water being scarcely navigable for a skiff. At a place called Cosh, at the head of Bay Roberts, upwards of a mile from the seashore, and at several feet above its level, covered with five or six feet of vegetable mould, there is a perfect beach, the stones being rounded, of a moderate size, and in all respects similar to those now found in the adjacent landwashes.—*Newfoundland Times.*

Bay, which runs in from Brigus Head $1\frac{1}{2}$ mile; in it is anchorage in 10 or 15 fathoms water, but it is entirely open. At the head of the bay, on the south side, is an island, within which vessels may anchor in 3 or 4 fathoms water, but must moor to the shores, where they will be secure from all winds.

PORTGRAVE BAY lies to the northward of Brigus, and has within it Sheep's or Ship Cove, and Cupid Cove; the latter lies on the south side of Portgrave Bay, and has in it good anchorage in 5 or 6 fathoms water, with room for 2 or 3 ships to lie at their anchors, almost land-locked. Its north side is so bold that ships lie alongside the rocks, and take in their cargoes. The land on the northern side of the entrance is remarkably high, and thence called Spectacle Head.

Sheep's or Ship Cove has within it 4 and 5 fathoms water, and will accommodate small vessels mooring head and stern, having their S.W. anchor in 22 fathoms, about $1\frac{1}{4}$ cable's length from the ship.

Portgrave is about three-quarters of a mile to the westward of Sheep's Cove. Within the islands the water is shallow and fit only for boats; but about one-third of a mile without them is anchorage in 20 to 25 fathoms water, but quite exposed to south-easterly winds.

From Burnt Head, the south point of Portgrave Bay, to Bay Robert's Point, the southern point of the entrance to Robert's Bay, the bearing and distance are N.E. $\frac{1}{4}$ N. $2\frac{1}{2}$ miles. About one mile to the southward of Bay Robert's Point is Blow-me-down Head, remarkable by being higher than the land near it; between Bay Robert's Point and Blow-me-down Head is a small cove called Hibb Hole.

BAY ROBERT.—In the opening to Bay Robert there is no invisible danger at its entrance. In sailing in you may borrow on either side, or go close to an island, of a moderate height, which lies about a mile from the entrance on the starboard side; and having passed the island you may run on about a mile, and lie land-locked in 9 and 10 fathoms. Between the island and the main vessels may anchor, but the ground is bad, and there are two sunken rocks within it, one lying near the inner side of the island, and the other above the island near the main. Two miles above the island on the same side is the north-west arm, in which is excellent anchorage in 5 or 6 fathoms water, on a muddy bottom, but it is necessary in sailing in to give the south point a good berth, in order to avoid some sunken rocks lying off it. On the starboard shore it is shoal also, nearly half a cable's length off.

SPANIARD BAY is separated from Bay Robert by a narrow neck of land. It is about one mile wide and four miles deep, having anchorage near its head in 7 or 8 fathoms water, but open to N.E. winds.

From Spaniard Bay to Harbour Grace Islands, the bearing and distance are N.E. about 2 leagues. These islands lie off the south point of the entrance of Harbour Grace. No vessel should attempt a passage between them and the main, as the ground is foul and shoal, and there are rocks about the islets. Bryant's Cove, southward of Harbour Grace, is not a place for ships, although a good place for fish. A rock lies in the middle of the entrance, having on each side of it 4 and 5 fathoms water. The ground within the rock is clean.

HARBOUR GRACE.—The entrance of this harbour lies to the northward of Harbour Grace Islands, and may be known by the lighthouse built on the north-easternmost of those islands, at one mile from the mainland, $3\frac{1}{2}$ miles from the town, and 110 yards south-west of the White Rock: the light is a fixed one, shown from the top of the keeper's dwelling, a white square wooden house with a roof painted in red and white stripes, at an altitude of 151 feet above the sea, and visible about 20 miles while to the eastward of the bearings of N.N.E. and S.S.W. from the lighthouse. At $1\frac{1}{4}$ mile within this light there is a rock, named the Salvage, situate nearly in the middle of the channel; and there is another called Long Harry, near the north shore, having only a boat passage between it and the main: both are of considerable height above the water, and have a good depth near them. Nearly a mile further in the bay, a bar or ledge extends from the south side, more than half way over. You may turn into Harbour Grace, all the bay over from side to side. The Salvage may be passed on either side, as most convenient; and having passed within this rock, you may go from side to side, by the lead, till you draw towards the edge of the bank, then proceed by the North Shore.

You may know when you are near the bar, or ledge, by two white rocks on the land, by the water-side, in a bank on the north side, which show whiter than any

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other part; these are about a mile below, or to the eastward of the beach, which is proper to be known: by keeping near the north shore, you will find $3\frac{1}{2}$ fathoms on the bar, and presently after 4, 5, 6, and 7 fathoms; but if you stand over to the southward, till you have advanced within the bar, or ledge, you will not have above 7, 8, or 9 feet of water. This sand trends S.E. from athwart the two white rocks above mentioned, and extends up to the south shore. Having passed its outer extremity, you may turn from side to side till within the beach, on the north side, and ride land-locked in 4, 5, or 6 fathoms, or higher up in 7, 8, 9, or 10 fathoms, as you please. On the point of the beach are two fixed lights, which appear as such for a distance of 3 miles, but beyond that they are blended into one, and may be seen 10 or 12 miles off. Both lights are from gas, about 50 feet high, 33 feet apart, and if brought to bear West or W. by S., they will lead in clear of the bar.

Northward of Harbour Grace is Carboniere Island and Harbour; a short distance southward of these is Mosquito Cove, in which is good anchorage on clean ground, although it is little frequented.

CARBONIERE ISLAND AND HARBOUR.—Carboniere Island lies one mile from shore: its south end is low, and has, or had, a fort on it. The island is bold-to, as are also the shores of the harbour; but off the S.W. end of the island are several rocks under water, which render the passage between the island and the main very dangerous. On the north side, opposite Carboniere Island, are two coves, namely, Clown's Cove, and Crocker's Cove, off which are several rocks both above and under water; therefore, in sailing or working in or out of Carboniere, give the rocks a small berth, and after you reach Otterbury Point, you may stand close over on either shore till you come near the head of the harbour. You may anchor in what depth you please in from 5 to 10 fathoms, but the ground is indifferent, being in some parts rocky.

From Carboniere Island to Salmon Cove Head, the bearing and distance are N.E. by N. about 2 miles. Salmon Cove Head is a remarkable high steep head, having to the northward of it a cove which affords an abundant supply of salmon, but only shelter for boats.

From Salmon Cove Head to Broad Cove Head, the distance is 4 miles; and from the latter head to Green or Western Bay Point, about $3\frac{1}{2}$ miles. Off Broad Cove and along shore about one mile to the northward, is anchorage in 10 to 15 fathoms water.

GREEN OR WESTERN BAY.—In the entrance of this bay is very good anchorage in 15 or 16 fathoms water, taking care not to go too far into the bay, lest the wind should come to the eastward, as it lies entirely open to the sea.

Devil's Point Cove lies $4\frac{1}{2}$ miles north-eastward of Green Bay, but is a place of little consequence. Northward of it is Island Cove, and still farther to the northward is Flamorough Head, which is black and steep-to, but there is no place of shelter near it except with off-shore winds.

BAY VERD, where the ships lie, is about half a mile westward of the head. The entrance is not above a cable's length across, and the ships lie in 5 fathoms water, about half a cable's length from the head of the bay with one anchor out astern, and the other cable fast on shore ahead. There is room only for 7 or 8 ships to lie, even in this manner; and it is a dangerous place with south-westerly winds, which blow right into it. Bay Verd is a place easily known by Bocallieu and the projecting land called Split Point. Bay Verd Head itself will serve to point out its position, for these three heads (Bay Verd Head, Split Point, and Bocallieu Island) appear prominent bluff land, and are very similar to one another when seen from the southward; and there is no hidden danger in entering the bay.

Bocallieu or Bocallho Island, high and almost inaccessible, is nearly 4 miles in length and $1\frac{1}{2}$ broad; its south end is about the latter distance from the main. A lighthouse, built of bricks, stands on the northern end of the island, in about lat. $48^{\circ} 8' 30''$ N., and long. $52^{\circ} 51'$ W., and exhibits a white revolving light, showing a bright face every 20'', placed at an elevation of 334 feet above the sea at high water, and in clear weather may be seen at the distance of about 27 miles; but when the southern end of the island bears N.N.E. and distant less than 8 miles, the light becomes obscured. The keeper's dwelling is detached from the lighthouse, and consists of a square building painted white with a red roof. Nearly midway between the south point of Bocallieu and Split Point there is a small rock, on which are

6 fathoms water, and on which the sea breaks very high in blowing weather, but the water is deep round it.

About $4\frac{1}{2}$ miles to the northward of Split Point is Point Breack-heart; after rounding which you will open Trinity Bay.

BOCALIEU ISLAND TO CAPE BONAVISTA.

TRINITY BAY.—This extensive bay, between Bocalieu or Bacalháo Island on the S.E. and Trinity Harbour on the N.W., is, upon an average, 5 leagues in breadth, and about 17 leagues in depth. The south-eastern point of the bay is named Point Grates; the next point to the north-westward is Break-heart Point, between which there is a small bay where boats may lie with off-shore winds, but within the bay there is a ledge of rocks, which, however, show above water. The course from Break-heart Point to Sherwick Point is nearly S.W. by W. 3 miles. Sourvy Island lies some distance from shore, to the southward of Break-heart Point; between it and Sherwick, the coast falls in a pretty deep bay, winding S.S.E. three-quarters of a mile.

OLD PERLICAN.—Sherwick Point, off which is a rock above water, forms the northern point of Old Perlican; vessels cannot go between the island and point, although the passage appears good and open, because the ground is altogether foul and rocky; always, therefore, run in southward of the island, and when past it, anchor in 4 or 5 fathoms. This cannot be considered a good harbour, as the ground is bad for holding.

The course from Old Perlican to Salvage Point is W. $\frac{3}{4}$ N. 5 miles. Salvage Point is low, and requires a good berth, having a reef of rocks running out from it nearly a mile.

The course from Salvage Point to Hunt's Head is W. by S., about $6\frac{1}{4}$ miles; and eastward of the head, at a mile distant, is Hunt's Harbour, which is only fit for small craft. Hunt's Harbour Rock, over which the sea generally breaks, lies 2 miles off the harbour, and you may clear it on the north side by bringing the Sugar Loaf well open of King's Head. At two miles farther is King's Head, and from King's Head to the Sugar Loaf the course and distance is S.W. $\frac{1}{2}$ W. about 3 miles.

Sillee Cove lies eastward of the Sugar Loaf, and is fit only for boats.

NEW PERLICAN.—From the Sugar Loaf to the north point of the entrance of New Perlican, the bearing and distance are S.W. $\frac{1}{2}$ W., 2 miles; and a mile farther is the harbour, which is small, but tolerably good, and where you may lie land-locked in 5, 6, 7, 8, 9, or 10 fathoms. The shores are bold-to, and free from danger; the entrance is nearly 2 miles wide, being bounded by Smutty Nose Point on the east, and Gorlob Point on the west, but as you advance the harbour becomes narrower, so that at the anchorage it will scarcely be half a mile broad.

At 3 miles southward from New Perlican is Heart's Content, a good harbour, fit for any ship, with excellent anchorage towards the north shore, in from 8 to 12 fathoms water. One league farther is Heart's Desire, fit for boats only; and $3\frac{1}{2}$ miles beyond that is Heart's Delight, another cove, adapted for small craft only.

From Heart's Delight, about 3 miles, is Long Point, projecting considerably into the bay, and a league farther is Witless Bay, by no means a place of safety, being too much exposed, and the bottom rocky; between Long Point and Witless Bay are two small islands, which you leave on your port side. One mile from Witless Bay is Green Harbour, where vessels may anchor in from 7 to 10 fathoms, and three miles farther is Hope-all-a-head; two miles beyond which is New Harbour, a place of shoal water, and only fit for boats.

DILDO HARBOUR.—At $2\frac{1}{2}$ miles southward from New Harbour, is Dildo Harbour, within which is very good anchorage, in a cove, at the northern side of the entrance, in from 8 to 20 fathoms water, good clean ground. Three miles thence in a westerly direction is *Chapple Bay*, the entrance of which is a mile broad, and the bay about 3 miles deep; here, behind a small island about 2 miles in, is good anchorage, in from 8 to 12 fathoms. *Long Cove* is situated about 3 miles northward from Chapple Bay, and 6 miles farther is the Point of Tickle Harbour Bay.

Tickle Harbour Point is the narrow promontory extending 5 miles in a north-

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easterly direction from the head of Trinity Bay, and dividing it into two parts. Not far from the extremity of the point the land rises to an altitude of 432 feet, and continues about the same height to the southward. Bowers Ledge, a rocky patch with $8\frac{1}{2}$ fathoms least water over it, lies N.N.W. 2 miles from the point, and from the ledge $\frac{1}{2}$ a mile to the north-eastward there is uneven ground.

TICKLE HARBOUR.—Tickle Bay, on the western side of Tickle Harbour Point, is an excellent place for fish, but though the water is shallow, and the ground good for holding near the head of the bay, it cannot be considered a safe anchorage, for a swell is nearly always setting in, which with easterly or north-easterly gales is very dangerous. At $\frac{3}{4}$ of a mile from the southern shore of Tickle Bay there is a reef running parallel with the land for about a mile, the outer or north-east end of which has $2\frac{1}{2}$ fathoms upon it. Tickle Harbour, formed in the southern corner of Tickle Bay, at the entrance of a salt water lake, is protected by a small island and a reef of rocks. Through the entrance, which has a width of only one cable and a depth of but 4 feet at low water, the ebb sets very strongly, and thence over a sandy spit, so that none but those acquainted should attempt to run in.

BIG AND LITTLE CHANCE COVES are only fit for small vessels during the summer months, the best shelter being found in a small bay, on the north side of Little Chance Cove. They are situated 4 miles to the northward of Tickle Harbour, and $4\frac{1}{2}$ miles W. by N. $\frac{3}{4}$ N., from the extremity of Tickle Harbour Point. When entering either cove, the north points must be kept aboard.

RANTEM COVE lies 2 miles northward of Chance Coves. Master's Head, the north-east point, has deep water close-to, but at $\frac{1}{2}$ a mile southward of it there is a bank of 15 fathoms water. The water in Rantem Cove is very deep, but anchorage and good shelter may be obtained by standing well up into its north or north-west arms. The south-west arm is too much exposed to the north for an anchorage; there is, however, a fresh water stream running into it, which is considered excellent for trout fishing. Near the middle of the cove, but rather on the north side, lies an islet named Boulton, 20 feet above high water; there are also two sunken rocks somewhat in the way of vessels going up to the north-west arm; one with two feet over it lying $1\frac{1}{2}$ cable S.S.E., and the other with five feet water upon it, lying the same distance S.S.W., from Boulton Islet. The other shores of the cove have deep water close to them.

BAY OF BULLS runs in a northerly direction between Master's Head and Bull Island for about 7 miles, and then turns north-westerly for 2 miles to its head, from which it is only about 2 miles across to Chance River in Placentia Bay. There are no dangers at a moderate distance from the shore, nor any place of good anchorage, except near the head of the bay, and in Great Mosquito Cove, situate on the western side of the bay, and $5\frac{1}{2}$ miles within Master's Head; in this latter place a vessel might find a moderate depth of water, within a cable's length of the shore. There are several other coves on the west side of the bay, wherein fishing boats may find shelter, the largest of which, named Little Mosquito Cove, has a 5 feet rock lying nearly in the middle of its entrance. Porcupine Reef, a rocky patch with from 9 to 14 fathoms on it, lies nearly in mid-channel and within the entrance of Bull's Bay, at $2\frac{1}{2}$ miles from Bull Island; it takes a direction towards a prominent peninsula, named Stanton Point, but there is deep water with muddy bottom westward of it.

BULL ISLAND, &c.—Bull Island, separated from the main by a channel $\frac{1}{2}$ a mile wide, is $1\frac{1}{2}$ mile long, and partially covered with wood, and bears North distant about 5 miles from Tickle Harbour Point, and 3 miles E. by N. $\frac{1}{2}$ N. from Master's Head. The position of its centre, which is elevated 281 feet above the sea, is lat. $47^{\circ} 46' 29''$ N., and long. $53^{\circ} 49' 41''$ W. A small and landlocked harbour, with a good supply of fresh water, situate on the northern side of the island, serves as an excellent place for fishing craft, where in stormy weather some 50 or 60 small schooners and boats may be seen taking shelter. When entering or leaving, keep the gravelly point on the eastern side of the entrance close aboard, in order to avoid a rock, awash at low water, lying near the western side. Here, on the days of full and change, high water takes place at 7h. 22m.; springs rise from 3 to 4, and neaps from 1 to 2 feet.

Near the middle of the sound separating Bull Island from the main, but rather towards the eastern entrance, lie the Flat Rocks, a rocky ledge 6 feet above the water, $\frac{1}{2}$ a cable's length W. by S., and a similar distance S. by W., from the south end of

which are two sunken rocks with only 2 feet over them. The north end of this ledge is steep-to, as are also both shores of the sound; but the best passage is northward of the Flat Rocks. A temporary anchorage may be obtained, in from 10 to 12 fathoms, over a coarse mixed bottom, at $\frac{1}{3}$ of a mile westward of these rocks. The stream through the sound is principally dependent on the wind, its velocity averaging $\frac{1}{2}$ a knot per hour.

Rix Harbour bears North from the west end of Bull Island, and has a depth in it of from 7 to 8 fathoms, affording good anchorage for moderate sized vessels. Fresh water is easily procured from one or other of the streams which empty themselves into the head of the harbour. Nearly in mid-channel of the entrance, and bearing N.N.E. and S.S.W. $\frac{1}{2}$ a cable's length from each other, are the Chalk Rocks, consisting of several heads, all of which, except the northern, are a few feet above high water. Vessels may pass on either side of these rocks, both shores being bold and steep-to.

DEER HARBOUR, 6 or 7 miles north-eastward of Bull Island, is an extensive place, with good anchorage, but barred with many shoals, the first of which lies midway between Tickle Point and Deer Island, having 6 fathoms on its shallowest part, and therefore is not dangerous; but one-third of a mile farther in is a bank, with only 2 and $2\frac{1}{2}$ fathoms water; bring the point of the N.E. cove open of Shallop Cove Point, and you will go clear to the westward in 7 fathoms water. There is also, another shoal lying off the point on the outside of Shallop Cove, on which are $2\frac{1}{2}$ fathoms which will be avoided by just opening the point of Deer Island with the first point on the main, within Deer Island; and after you have passed Harbour Island, you may anchor on good ground, in from 10 to 26 fathoms.

About $2\frac{3}{4}$ miles N.E. from the entrance of Deer Harbour is Jones' Harbour, the entrance of which is not above a quarter of a mile wide, and the channel in is, in several parts, still less: it runs in $2\frac{1}{2}$ or 3 miles, and has good anchorage in from 5 to 24 fathoms water. South-westward is a high and steep island, called Jones' Island; about 4 miles from which is Bald Head; and 2 miles farther is Ganny Cove, having its entrance confined, being not more than a quarter of a mile wide, but there is, nevertheless, good riding within it in 10, 12, and 15 fathoms. About a cable's length off the north shore, just at the entrance, lies a sunken rock, and about a mile S.S.E. from the south point of Long Island, is another rock, by some called White Island, just appearing above water; this rock bears S.W. from Random South Head.

RANDOM SOUND includes several arms and harbours; thus Random and Smith's Sounds unite and form Random Island, the channels being narrow, long, and circuitous. At the junction of the two sounds is a small island, with a bar almost dry at low water, the passage being not a mile broad.

In Random Sound, about 3 leagues from Random North Head, lies Hickman's Harbour, where you will find good anchorage in 15 fathoms. Random North Head bears from Random South Head N.E. $\frac{1}{2}$ E., distance 3 miles. When you are within the entrance of Random Sound there is a branch which runs towards the south-west, named the S.W. Arm, about a mile within which is Fox Cove, fit for boats; and 2 miles farther Little Heart's Ease, a similar cove running in a quarter of a mile, then dividing into two branches; the western one has 4 and 5 fathoms within it, but the eastern branch is shallow and only adapted for boats. There is also anchorage 2 miles farther, on the same side, in a cove with an island before it, with 8 fathoms, and not far from this is another cove on the northern side, where a vessel may ride in 7 fathoms.

SMITH'S SOUND has generally deep water, and is in most places one mile wide, until you get near the head. Shut-in Harbour is on the starboard side, nearly at the entrance, and has no safe anchorage, the ground being rocky; 3 miles farther up is Pope's Harbour, which also is encumbered with rocks, besides a shoal lying near the middle of it. The direction of the channel is westward about $7\frac{1}{4}$ leagues. Eastward of Random Island are Duck and Green Islands, both lying a considerable distance from the main; the latter is high and may be seen so far as Trinity Harbour, and bears from Bonaventure Head about S.W. $\frac{1}{4}$ S., distant nearly 6 miles; and Bonaventure Head bears from the entrance of Smith's Sound E. by N., distant 5 miles. North-westward of Green Island is Anthony Island and Ireland's Eye; the latter is $3\frac{1}{2}$ miles in length, and lies in a S.W. and N.E. direction, making the port side of the entrance to Smith's Sound. The northern point of Ireland's Eye bears

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from Bonaventure Head nearly S.W. distant $5\frac{1}{2}$ miles; about midway between these is another small island named Ragged Island.

Ryder's Harbour, a small place of anchorage, on the eastern side of Random Island, is formed by a small island bearing from Green Island W. $\frac{1}{4}$ N., distant 4 miles. The passage to it is round the west end of the point, off which are some scattered rocks, both above and under water. Within this harbour are 3 fathoms water, and about a quarter of a mile from Rider's Island the N.W. arm branches off, running westward one mile, and being about a quarter of a mile wide; here are 7 fathoms and good anchorage. From Bonaventure Head to Port Bonaventure the distance is 2 miles.

PORT BONAVENTURE.—The best entrance to Port Bonaventure is between two small islands, but you may go on either side of them in 3 and 4 fathoms water; with a leading wind there will be little danger, and when you are within, and have passed these islands, anchor in 4 and 5 fathoms. Southerly winds here send in a very heavy sea; there is, however, a secure place for boats within a point behind the Admiral's Stage, appearing like a great pond, where 100 boats may lie, even with bad weather, in safety.

From Bocalieu North Point to Bonaventure Head, the course and distance are N.W. $\frac{1}{4}$ W. $22\frac{1}{2}$ miles. Bonaventure Head is remarkably high and steep.

TRINITY HARBOUR.—From Bonaventure Head to the entrance of Trinity Harbour the course and distance are N.E. $\frac{1}{2}$ N. $4\frac{1}{2}$ miles, and from Bonaventure Head to the Horse-Chops, E. $\frac{1}{2}$ N., 8 miles.

Trinity Harbour is considered one of the best and largest harbours in all Newfoundland, having several arms and coves, where some hundred ships may ride land-locked. It is a place where you may safely turn in or out, being bold-to on each side, and having no danger but what is visible; except when going into the S.W. arm where the Admiral's Stage usually is, there is a shoal, called the *Muscle Bank*, which shoots off from the point within the small island on the port side going in, and extends over N.N.W. about a third of the breadth of that arm. Being within that bank, which will discover itself by the colour of the water, you may edge over close to the south shore, or keep your lead going to avoid the Muscle Bank, giving it a small berth. In order to avoid it, the mark is, or was, the house, standing over the steep perpendicular rock, situated between Tavernor's Point and Ship Cove, open of the Neddick; keep this mark on, until you are half-way over to the Neddick, then haul towards the S.W. branch, taking care to avoid the south shore, till you shut in Tavernor's Point with the Neddick; you will then go within the Muscle Bank.

You may anchor in from 14 to 10 fathoms and approach near to the stage on shore, so as to make a stage with topmasts to the stage on shore, to load or unload your ship. This will be found a most excellent harbour; for, after you are in the S.W. arm, you will perceive another branch running up to the N.W., which is continued by another to the S.W.; but there is a bar or ledge at the entrance of this S.W. arm.

The N.W. arm is also a large place, having good anchorage for 500 sail of ships. Besides the before-mentioned arms, the main harbour turns up to the north.

Ships, being within the harbour's mouth, may safely ride in a large cove on the starboard or east side, land-locked, on good ground: here the planters live. Over against that cove, on the west side, are two other coves, the southernmost of which is named the Vice-Admiral's Cove, and is very convenient for curing fish; and above, or to the northward of that, is a large cove, or arm, called Gots' Cove, where there is room enough for 300 or 400 sail of ships to ride, all on clear ground; there, neither winds, sea, nor tide can hurt you, and in this place ships may lie unexposed until the weather becomes clear and open.

There are several other anchoring places in this harbour with good clean ground. The bottom everywhere is tough clay, with 4 and 5 fathoms water, within two boats' lengths of the shore; and 6, 7, 8, 9, 10, 12, and 14 fathoms, and in some places more, in the middle of the arms and channels. You may turn in or out readily, observing your tide, which rises about 4 feet, and sometimes more.

Robinhood's Bay is formed on the south-west side by Sherwick Head. The entrance is a mile wide, and the bay extends northward nearly 2 miles; here vessels frequently ride and fish in from 7 to 17 fathoms water. At the further or upper end

of this bay there are some spots of shallow water, but at its entrance, and between Sherwick and Fox Island Points, there is no danger whatever.

Salmon Cove and *English Harbour* lie to the eastward of Robinhood's Bay, being only divided from it by a narrow neck of land, called Fox's Island. The former of these runs in northerly, and is considered a good fishing place, as it is clear of dangers, and has a good depth of water, from 17 to 10 and 8 fathoms; the eastern shore is bold-to, and at the further end of the cove there is a small run of water, which extends about 2 miles to the northward.

English Harbour is situated at the south-eastern entrance of Salmon Cove. It is a clean bay, where you may ride in 4 and 5 fathoms water. From hence the coast rounds to the eastward to the Horse-Chops, a distance of more than 3 miles, and is all high land, steep-to, and without danger. To the north-eastward of the Horse-Chops is Green Bay, open and entirely exposed to the southward, and having at the eastern part of it a small sandy beach with a rivulet of water: this place is little frequented, and is neither convenient for ships to fish or ride in. When past this bay, there is no sheltering cove or place until you reach Ragged and Catalina Harbours.

Ragged Harbour is so named from the rough and craggy appearance of the surrounding rocks, which render it unsafe for either boats or ships to enter; but for those who intend going there, we will observe, that they must go to the northward of the reef of rocks at its entrance, running on North, until the harbour comes quite open, then you steer in between the Round Island near the main, and a large black rock, being the outermost of the ragged ones before mentioned: sail on until you are to the westward of them all, or until you get the south head of Catalina to appear between the westernmost rock and the main, when you may anchor. A river of good water is at the head of the harbour.

CATALINA HARBOUR is nearly 2 miles to the northward of Ragged Harbour. It is a good harbour for small vessels, and may be known by a lighthouse on a singular green island at the south point of its entrance, consisting of a keeper's dwelling built of wood, $1\frac{1}{2}$ storey high, with a pitched roof, through the centre of which rises a low stone tower surmounted by a lantern, exhibiting a fixed light at an altitude of 86 feet above the level of the sea, and visible from E.N.E., round southerly, to S.W., for a distance of about 14 miles in clear weather. Lat. $48^{\circ} 30\frac{1}{2}'$ N., long. $53^{\circ} 6' 18''$ W. Nearly half a mile to the northward of Green Island are the Brandy Rocks, a ledge over which the sea frequently breaks; you may go on either side of these rocks, giving the little island a berth, or with a leading wind between the island and the main, though this passage is exceedingly narrow, in 4 and 5 fathoms. Just within the entrance of the harbour is Charlton Rock or Shoal, lying nearly mid-channel, over which are only 8 feet water; you must avoid bringing the north point of Green Island on with Burnt Head, the south point of the harbour, for that will carry you right upon the rock. There is a passage between the island and the rock, and also between the rock and the north shore, only steering nearer the main about two thirds over.

Little Catalina Bay lies inwards on the southern side. From Catalina Harbour to Little Catalina the course is about N.E. $1\frac{1}{2}$ mile; and thence to the north head of the bay, E.N.E. a little easterly, $3\frac{1}{2}$ miles. When within the harbour you may anchor close to the shore in 4 and 5 fathoms, land-locked; or to the southward of the little green island in $3\frac{1}{2}$ fathoms, or by running up 2 miles farther obtain fresh water. In the S.W. arm or branch of the river, where there is anchorage in 5 fathoms, the harbour runs westerly. Sometimes the water in this harbour will suddenly rise 3 or 4 feet, then fall again, and in certain seasons it will often do so two or three times in 3 or 4 hours. It abounds with salmon, and the herb *Alexander* grows luxuriantly on the little island. Near a small cove at the N.W., is a sort of mineral, of a glittering nature, generally called Fire-stone. Excellent willicks may be found on the rocks.

The course from the south to the north head of Catalina is N.E. $\frac{1}{2}$ E., $5\frac{1}{2}$ miles, and between them from 13 to 5 fathoms water may be found. The whole way is a kind of broken ground, over which, in blowing weather, the sea breaks very high.

From the north head of Catalina to Flower Point, the course is N.N.E. $\frac{1}{2}$ E., distant $2\frac{1}{2}$ miles; one mile eastward of the point lie some sunken rocks. You may

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go between Flower Point and these rocks, in 6 fathoms water, but it is more advisable to pass outside them; this you will readily do by bringing Bonavista light open eastward of Spiller's Point, or by keeping the south head of Catalina open of the north head.

Bird Island.—From Flower Point to Bird Island the distance is 2 miles. Within Bird Island there is a small bay where ships can occasionally ride, in one branch which runs up towards the west, and in the other, amidst some rocks which are above water. Bird Island Bay extends so far as Cape L'Argent.

From Flower Point to Cape L'Argent the distance is $3\frac{3}{4}$ miles; the latter is rather a low rocky point, having also a large rock above water lying off it.

From Cape L'Argent to Spiller's Point the distance is $1\frac{1}{2}$ mile; between these two points the lead falls into very deep water. Spiller's Point is steep and bold-to, but not very high, with a rock above water near it; over the point you may discern the high land of Port Bonavista a great way off at sea.

From Spiller's Point to Cape Bonavista the bearing and distance are about North $2\frac{3}{4}$ miles; there is a deep bay between, which might be mistaken for the harbour of Bonavista, from the head of which it is only divided by a neck of land, 2 miles over, and from Red Head Bay it is not above a musket-shot.

FROM CAPE BONAVISTA TO CAPE FREELS.

CAPE BONAVISTA is situated in lat. $48^{\circ} 42' N.$, and long. $53^{\circ} 8' W.$ * and appears at a distance of a bluish or sky colour; it is a steep rocky point, having 4 fathoms close to its base.

On the extremity of Cape Bonavista there is a square tower 36 feet high, and painted in red and white vertical stripes, from which a revolving light is exhibited at an altitude of 150 feet above the sea, visible in every direction seaward about 30 miles; the light appears red and white alternately, and completes its revolution in $1\frac{1}{2}$ minute. If this lighthouse is kept open of Spiller's Point it will lead clear outside the Flower Rocks.

About half a mile N.N.E. from the extremity of the cape lies Gull Island, which, though small, may easily be recognised, as it is of moderate height and elevated in the middle, and makes something like a round hat with broad green brims: it is visible 4 or 5 leagues off, when the weather is clear. N.N.E. $\frac{1}{2}$ E., distant $3\frac{1}{2}$ miles from Gull Island, is the Old Harry Rock, of only 13 feet water, from which a reef or bank extends to the N.E. nearly 3 miles, having several dangerous spots upon it, of only 3 or 4 fathoms; the outer edge of this danger is named the Young Harry; at its northern extremity are 10 fathoms water, and a little farther off 45 fathoms. Between the Young Harry and the middle ground of 18 feet, are 12, 20, and 50 fathoms; to the northward of the middle ground are 60 and 40 fathoms; to the eastward 19 and 20 fathoms; to the southward, and between it and the Old Harry, 26 and 31 fathoms. At the north part of the Old Harry are 11 fathoms; to the westward 30 fathoms; to the S.W. 9 fathoms; and a little farther S.W. 57 fathoms. Abundance of fish are caught by the boats which frequent this bank, but it is very dangerous for shipping. The sea commonly breaks over Old Harry, unless in fine weather and the water be very smooth, but the other parts of the shoal show themselves only in, or immediately after, heavy gales on the shore.

In order to avoid the Old Harry, Gull Island should be brought on with the Green Ridge, which lies considerably inland; but you must be cautious, for this mark will carry you too close to the Young Harry. Captain Bullock says:—"Vessels running along shore to avoid these rocks, must be careful in keeping Cape Bonavista open with the westernmost extremity of a high range of land to the southward, called the Inner Ridge; these dangers, together with the long ledge, named the Flower Rocks, already noticed, render it very imprudent for a mariner to attempt making land hereabout in thick or boisterous weather; indeed, at any time, the Island of

* This is according to the chart of Messrs. G. Holbrook and W. Bullock, R.N., published in 1822 by the Admiralty. An edition of the chart published in Paris, in 1854, places the cape in long. $53^{\circ} 2' 31'' W.$

Bocalieu is the best and safest land-fall for the stranger that is bound to any part of Bonavista Bay."

BONAVISTA BAY.—This extensive bay is limited by Cape Bonavista on the south, and Cape Freels on the north. The bearing and distance from one to the other are N. $\frac{3}{4}$ E. and S. $\frac{3}{4}$ W., 37 miles. The whole coast between is tortuous or much indented, rocky, difficult, and dangerous. On the south the land is high and mountainous, and the coast steep and iron-bound; on the north side it is low and marshy, and from the shore the water is shoal to a considerable distance. The bay abounds with small islands, and is encompassed with dangers on every side. The harbours, sounds, and inlets, are deep, extensive, numerous, well sheltered, and safe; but they are generally so deeply embayed, the passages into them so intricate, and the surrounding land so similar in appearance, that their navigation is seldom attempted, unless by those who, from long experience, have a perfect knowledge of the coast; yet should it become necessary, from stress of weather or other circumstances, for a stranger to seek shelter, the places recommended for this purpose are Barrow, and Great Chance Harbours, in the S.W. part of the bay, or New Harbour and Cat Cove on the N.W.; but the extreme narrowness of the entrance to New Harbour is a great impediment, and renders Cat Cove the more preferable.

PORT BONAVISTA.—From Cape Bonavista to Port Bonavista the course is to the south-eastward about $3\frac{1}{2}$ miles. Vessels steering for this port may pass between Gull Island and the cape, or between Gull Island and the Old Harry Rock, or to the northward of the Young Harry altogether. The passage between Gull Island and Bonavista is about three-quarters of a mile wide, and both the cape and island are steep-to, having 4 fathoms close to each side, and 16 or 18 fathoms mid-channel; but it will be advisable not to go too near Gull Island, on account of a rock under water, which lies about 300 yards off the south-eastern part of the island. When you have passed through this channel, and find yourself to the westward of the cape, you will see Green Island, distant about half a mile from the cape. Large vessels commonly leave Green Island on their port side in their course to Port Bonavista, going between Green and Stone Islands, where the channel is fully $1\frac{1}{4}$ mile wide, and with 12, 16, and 18 fathoms water in it, and no danger except a sunken rock of 3 fathoms water, which lies about 200 yards north-eastward of Green Island; or they may go westward of Stone Island, and run southward till they open the Harbour of Bonavista, and are past Moses Point, and so southward of the rocks called the Swerrys, which are high rocks, having no passage northward of them. Here you may anchor in from 10 to 8 fathoms, as you please, but must always have a good anchor in the S.W., and another fast in the Swerrys, or in the N.W., for westerly winds blow directly into the road.

Small vessels may go between Green Island and the main, and so to Red Head; but the bay between the points (over against Green Island) and Red Head, is all foul ground. About a mile to the south-eastward of Green Island is a reef named the Red Rocks, lying off Red Cove. You may go between these and the land into Red Cove, as there are 6 fathoms water, and in the cove $4\frac{1}{2}$, 4, and 3 fathoms, but the ground is all foul. There is a passage also to the southward of these rocks, and between them and Western Head, in which are 6 fathoms. There is a small rock under water, a little to the eastward of Western Head, which lies about a cable's length from the shore, and the sea commonly breaks over it, but boats can go between it and the shore. To the southward is Red Head, or Point, and farther on is Moses Point; between is a large bay or cove, named Bayley's Cove, where you may anchor on occasion, not advancing too far in, as all its shore is rocky and shoal.

Bonavista Harbour is an anchorage of little consideration, farther than being an eligible situation for carrying on the fishery, being so very badly sheltered that, in N.W. gales, immediately following a continuance of heavy winds from seaward, the water breaks right athwart the harbour, and sometimes the whole of the fishing-boats founder at their anchors, and not unfrequently many of their stages are destroyed: however, vessels, during the summer months, moor under Swerry Head, in 8 or 10 fathoms: but even there; as in every other part of the harbour, the ground is very rocky and uneven.

BLACK HEAD BAY is situated 5 miles in a W.S.W. direction from Cape Bonavista, and Southern Head is 11 miles W. $\frac{3}{4}$ N. from Cape Bonavista. Southern Head and Black Head form the two extremities of Black Head Bay, and bear from

each other N.W. by W. $\frac{1}{4}$ W., and S.E. by E. $\frac{1}{4}$ E., about 7 miles. On the south-west side of this bay, at about $3\frac{1}{2}$ miles to the southward of Southern Head, is the fishing establishment at King's Cove; but this is even a less desirable place of shelter than Bonavista, as it lies directly open to seaward, and has a foul bottom.

From Southern Head to Western Head the distance is $3\frac{1}{2}$ miles, the coast between forming five coves, at the second of which, Keels, is a fishing village; but neither this nor any of the other coves are fit places for vessels of burthen.

From Western Head the land bends W.S.W. $\frac{1}{2}$ S., and leads to numerous coves, bays, and arms of the sea, most of which have deep water and places of anchorage. We shall here enumerate the principal of these, with their respective situations; but, as many of them are too deeply embayed for general navigation, we shall not extend our directions to a minute or particular description of them all, but confine ourselves to such only as are situated in prominent parts of the bay, and are mostly fitted for general use and commonly frequented.

Plate Cove is situated about $7\frac{1}{2}$ miles from Western Head; its entrance, between Arrow Point and Plate Cove Head, is three-quarters of a mile wide, whence it bends in more than a mile southward. At its eastern extremity is a run of fresh water, but the bottom is foul and rocky; it is therefore not much frequented.

Indian Arm lies about S.W. by W. from Plate Cove Head, distant 3 miles; it is a narrow inlet running in nearly S.W. about two miles, and terminates in a rivulet of fresh water.

Southward Bay, separated from Indian Arm only by a narrow neck of land, is an extensive branch of the sea. Its entrance between Red Head and Kate's Harbour Head, is fully a mile wide, with 30, 50, 80, and 90 fathoms water in mid-channel: hence it bends south-westward $7\frac{1}{2}$ miles, becoming narrower as you advance, but with deep water and no danger. On the western side there is an opening named Hayes Cove, which lies about 2 miles from Kate Harbour Head.

Vessels intending to seek either of these places, must beware of the Bacon-bone Rock, a danger of only 18 feet water, which lies W. $\frac{1}{2}$ N., distant a mile from Western Head, and directly in the fairway of the navigation. To avoid this danger, do not shut in Southern Head until Little Denier comes on with the outer Shag Island.

Kate Harbour lies westward of Plate Cove; its entrance is three-quarters of a mile wide, and the harbour runs in about $1\frac{1}{4}$ mile, with a depth of water of 36, 29, and 27 fathoms in mid-channel, decreasing as you advance to the farther end. There is a rock under water off its entrance with 7, 8, and 9 fathoms round it, which lies nearer to Kate's Head, but there is a passage between them, and also a still wider channel on the western side of the rock.

Sweet Bay is another extensive inlet, lying westward of Kate Harbour, the entrance to which is between Cutler's Head and Chance Point, which entrance also leads to Maidenhair Cove, and Little and Great Chance Harbours. Sweet Bay is the easternmost inlet. Having entered it, and passed Cutler's Head, which is rocky and steep-to, you will see Turpook Island, which is small and narrow, and has at about half a mile to the south-west of it an island named Woody Island, and between them a rock under water; there is a passage on either side of these, and when you get beyond Woody Island, the bay becomes about three-quarters of a mile wide, with 60 fathoms water midway; advancing still farther you will observe several islands in your passage; there is also a rock under water on your starboard side, three-quarters of a mile beyond Woody Island; it lies abreast of a little island which is in mid-channel; farther on is Wolf Island, between which and the main there is no passage; off this lies Gooseberry Island, between which and Wolf Island there are 30 fathoms water, but the channel is narrow, and that on the eastern side of Gooseberry Island is much wider. Sweet Bay here divides into two branches; that to the eastward is named the S.W. arm, and has directly before its entrance Hunt's Island, the channel to the eastward of which has 10, 12, and 14 fathoms water, and that to the westward 7 and 9 fathoms: you will then see on your starboard side a small island, and can pass it on either side, and, having done so, will drop into 24, 22, and 20 fathoms water; the head of the arm is foul and rocky. The N.W. arm is divided from the S.W. arm a little below Hunt's Island, and at the farther end of Wolf's Island is nearly a mile wide, whence it runs south-westerly $3\frac{1}{4}$ miles,

with a good depth of water, and clear of dangers; at the bottom is a sandy beach and a small rivulet.

The entrance of Great Chance Harbour, which is an excellent anchorage, lies $9\frac{1}{2}$ miles W. $\frac{1}{2}$ S. from Western Head. The passage to it is clear with the exception of the Bacon-bone Rock already mentioned. In sailing for this place the safest way is, not to shut in Southern Head until the isle named Little Denier comes on with the outer Shag Island. Thus the Bacon-bone Rock will be avoided, and you may steer for the harbour W. by S., until you get abreast of Chance Point. You must now guard against a sunken rock, at the southern part of the entrance, with only 6 feet of water over it. Within this rock, and in a line with it, are two islets named the Mustard-bowls; in order to avoid the rock, be careful not to shut in the western Mustard-bowl with the eastern, but, having passed the latter, you may stand boldly in, approaching the shore on either side as you please, and you may anchor anywhere above the narrows in from 11 to 5 fathoms, perfectly land-locked and good holding-ground. Wood and water may easily be procured here.

Off Chance Point (the outer point of Chance Harbour), and directly in a line between the southern part of Long Islands, there is a spot of ground with 7 fathoms over which the sea breaks in very heavy gales, but it is not dangerous in fine weather.

At the distance of almost a mile, N.E. a little northerly, is the Chance Gull Rock, steep-to, and almost visible. To the westward is Deer Island, $1\frac{1}{4}$ mile long, but narrow, between which and the main there is a good channel to Chandler's Reach.

CHANDLER'S REACH is the channel leading to Goose Bay and Clode Sound: the course through it is W. $\frac{1}{2}$ S., which, from the N.W. point of Deer Island, will take you to Connecting Point, the point of the peninsula that divides the former from the latter.

Goose Bay runs in south-westerly, about $7\frac{1}{2}$ miles, and by keeping in mid-channel you will meet with no danger, but have 47, 40, and 36 fathoms water, until, having passed Lubber's Hole, the depth decreases to 12, 13, 10, and 8 fathoms, when you will see a small island, situated westward of Goose Head; behind and to the westward of this, you may anchor in from 4 to 7 fathoms, or farther to the southward in $5\frac{1}{2}$ fathoms. In most of these inlets you will lie perfectly safe, and entirely land-locked. Fresh water and wood are plentiful, and easily obtained.

Clode Sound is a fine branch of the sea, running in from Chandler's Reach fully 20 miles; it has many places of very good anchorage, and is without danger. Vessels may find perfect safety on the northern shore, at Brown's Cove, or farther in at Long Cove, or Platter Cove; or on the southern shore, at Bunyan's and Love Coves; or, passing the Platter Rocks, and steering westward, at Freshwater Cove. The mid-channel has all the way deep water, and there are no rocks except, as in Goose Bay, near the shores.

Lion's Den is an opening lying to the N.W. of the entrance of Chandler's Reach; to enter it you must sail to the northward of the Deer and Cluster Islands, and pass the narrows, which is about one-third of a mile wide, and has 24 fathoms water in it; having passed the entrance about a mile, there is a sunken rock, round which are 4, 5, and 6 fathoms; you may then perceive the inlet to branch off into two divisions; that to the N.W. is very narrow, and has a rocky islet at its entrance: but that which runs to the S.W. is broader, and has 11, 14, and 10 fathoms water in it; it runs in from the sunken rock about $1\frac{1}{2}$ mile, and at its farther end becomes shoal, narrow, and rocky.

The Long Islands are four in number, having narrow channels between them, some of which are encumbered with rocks and consequently dangerous; the eastern island is the largest and broadest, the next to it is the longest, the two western ones are smaller and narrower; they form the northern boundary of the passage from Western Head to Chandler's Reach, and also the southern boundary to Swale Tickle and Newman's Sound. Off the north-eastern point of the largest of the Long Islands lies a sunken rock, close to the land, and therefore easily avoided: this point bears from Western Head nearly W. by N. distant 6 miles.

NEWMAN'S SOUND is a large arm of the sea, running in W. by N., having at its entrance Swale Island, which is nearly $4\frac{1}{2}$ miles long, and not one broad in the widest part; this divides the entrance into two channels; the southern passage is called the Swale Tickle, and the northern one goes by the general name of Newman's

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Sound. To sail from abreast of the Western Head into the Swale Tickle, you should steer W.N.W. $\frac{1}{2}$ W. To sail from abreast of the Bonavista Gull Island, steer W.N.W. $\frac{3}{4}$ W. 24 miles, and it will carry you a little southward of Little Swale Island, and in the fair way of the passage; but in advancing through this channel there are several obstructions, and the passages thence into Newman's Sound are so narrow, that it will always be advisable to go northward of the Great Swale Island. To do this, having rounded the Gull Island, steer W.N.W. $\frac{1}{2}$ W. 23 or 24 miles, when you will have the sound open, and can proceed accordingly; it is fully $1\frac{1}{2}$ mile wide, and extends nearly in a W. by N. direction from the east end of Swale Island 11 miles, having several places of good anchorage; those on the southern shore are South Broad Cove, Minchin's Cove, and Stanford Cove.

South Broad Cove is situate $2\frac{1}{2}$ miles beyond the western point of Swale Island, and is a place of great safety. The passage in is to the south-westward, and you will ride well sheltered in 10 fathoms, free from any danger. There is a small island at the entrance, which you will leave on your port side.

There is a long narrow point of land running out to the northward, which you will round, and turning southerly, *Minchin's Cove* will appear open; here you will lie in 5 fathoms, opposite a sandy beach. Westward of this is Mount Stanford, off the point of which lies a small island, reaching half-way over the passage, making the channel in this part very narrow; the best course through, is to the eastward of this island, in 9 fathoms; here an opening appears to the eastward, called Buckley's Cove, fit for small vessels: the coast now winding to the westward, forms a broad bay, with 20, 26, and 27 fathoms water in it, free from any danger, and shallowing on each side towards the shores. At the south-western part of this is *Stanford Cove*, having a sandy beach, the approach towards which shallows gradually.

Barrow Harbour.—Little Denier Island lies off the entrance of Barrow Harbour, which lies south-westward of it, and is safe and convenient. It is formed by three islands, Richard, Goodwin, and Keat; and the entrance is that part between Goodwin's and the main, and is about 500 yards wide, and not very difficult of access. The harbour is a mile long: the lower part is rocky, and not well-sheltered, but the upper part is completely land-locked, and has good holding ground. The course to this place from Gull Island, off Cape Bonavista, is nearly N.W. by W. $\frac{3}{4}$ W. 22 miles. In coming from the northward, the course from the Eastern Gooseberry Rock towards Barrow Harbour will be S.W. $\frac{1}{4}$ W., 18 miles. Gooseberry Rock appears just above water, and lies in lat. $48^{\circ} 57'$. In this course you will have to avoid the Malone Rock and Ledge, the latter being a shoal, lying S. $\frac{3}{4}$ W., distant a mile from the rock, which is always above water. This shoal has never less than 4 fathoms over it, so that in fine weather no damage whatever is to be apprehended.

On approaching Little Denier, you must be careful to avoid the Outer Rock, lying three-quarters of a mile E. $\frac{3}{4}$ N. from that island. It has only 4 and 6 feet of water on it; but as the sea constantly breaks, it is easily guarded against. Between Little Denier and Richard's Island there is also a range of rocks, called the Brandishes, at distances from each other, and extending nearly half way over towards Little Denier, with from 14 to 17 feet upon them; between are channels of 7 and 8 fathoms. These make the northern channel preferable for strangers without a pilot. To run clear of the Brandishes, you must keep Wedge Point (the projection within the harbour) a little open to the southward of Smoky Ridge, (a range of high land at the top of the harbour,) until you bring Broom Head on with the middle Shag Island; the passage is then without obstruction till you near Wedge Point, off which at 70 yards lies a sunken rock, with 8 feet of water; you may then sail up abreast Pudner's Cove, until you are entirely shut in from the sea, and anchor in from 10 to 18 fathoms; some vessels prefer anchoring in Garland's Creek; but without running well up, the ground is foul. There is a small fishing establishment here; good water may be procured in Pudner's Cove, and abundance of fire-wood. The land about Barrow Harbour is higher than the neighbouring coast, and may hence be easily recognised.

Sandy Cove, on the north side of Newman's Sound, about 4 miles beyond Barrow Harbour, has good anchorage. It will be readily known, having the only sandy beach on this side of the sound; there is no danger in entering it, and it is perfectly safe, the depth of water being from 10 to 20 fathoms. Between this place and Barrow Harbour lies the Half-way Rock, above water, but if you keep outside, and pass to the southward of it, there is no danger, it being steep-to in 4 fathoms.

At a mile westward from Sandy Cove, are Great and Little Adventure Coves, two snug little places on the same side of the sound, but which from the narrowness of their entrances are adapted only for small vessels. Between these places lies a sunken rock about 80 yards from the shore, with only 4 feet of water on it. Sydney Island lies off the entrance to Great Adventure Cove; the passage in is northward of this island, for between the island and Harbour Head there is no passage.

North Broad Cove lies also to the northern side of Newman's Sound, and is a convenient well-sheltered anchorage; its entrance may be known by a high round island lying on the west side of it, named Black Duck Island. On sailing in you must keep the island on board, until you make a tickle or inlet, between it and the western shore, in order to avoid a sunken rock at the eastern side; after which keep as close as possible to the eastern shore, as a dangerous rock lies nearly in mid-channel; being inside of which you may anchor in from 10 to 25 fathoms, muddy bottom. Wood and water may be procured here.

There are some dangerous rocks off the northern shore farther up Newman's Sound, one of which is called the Shag Rock, and lies three-quarters of a mile beyond Black Duck Island: and a mile farther on is the Hall's Rock. These rocks are under water, and distant about a cable's length from the land; close to them are 4 and 5 fathoms, and between them and the shore there is a passage of 6 and 7 fathoms; the northern shore, therefore, should always have a good berth in sailing up Newman's Sound, for by keeping nearly half a mile off you will avoid them all.

SALVAGE BAY lies on the northern side of the promontory, which divides it from Newman's Sound. Within it are several runs of fresh water, but no place of good shelter.

The little island named Ship Island lies in latitude $48^{\circ} 45'$, longitude $53^{\circ} 37' 30''$, and at 8 leagues N.W. $\frac{1}{2}$ W. from Cape Bonavista; and Damnable Harbour lies W. $\frac{1}{2}$ S. $5\frac{1}{2}$ miles from Ship Island. Ship Island may be known by a remarkable bald point like a sugar-loaf. The harbour is well adapted for small vessels, but its very narrow entrance disqualifies it for ships of burthen; there is a rock off the southern part of the entrance, and another off the northern side of the island, which lies in the middle of the harbour. There is good anchorage all round the island, in 4 to 5 fathoms, sandy bottom. Water may be easily procured, but very little wood.

Between Damnable Harbour and Salvage Bay are several small islands and rocks; the largest of these is named the Baker's Loaf, and is a narrow island, about three-quarters of a mile long.

In sailing from Gull Island, Bonavista, to Damnable Harbour, steer W.N.W. $\frac{1}{2}$ N., about 7 leagues, and round Shag Islands; proceed thence to the northward of the Baker's Loaf, or steer N.W. $\frac{1}{2}$ W. from the Gull towards Ship Island, and then W. $\frac{1}{2}$ S. from Ship Island to the entrance of Damnable Harbour.

Morris Cove is a safe anchorage, situated on the north side of the island bearing that name, and lies to the northward of Damnable Harbour. In sailing for it keep Ship Island well on board, on account of a dangerous reef which extends from Flat Islands nearly two-thirds of the way towards Ship Island, on some parts of which are not more than 17 or 18 feet. Proceed, therefore, to the northward of Ship Island, passing at not more than half a mile distance, and when you are well inside, avoid shutting in Lackington Rock with Varket Island (known by its forming two remarkable hummocks), as there are several clusters of rocks between Ship and the Horse-chop Islands, on the south side. Steer for the Varket until you get abreast of Lackington Rock, then keep Lackington Rock on the northern extremity of Ship Island, until the Varket bears North, to clear two sunken rocks off the N.E. end of Morris Island. You may then sail directly for the cove, which you can enter without fearing obstruction, and anchor in any part of it, in 25 to 5 fathoms; but the western side of the cove is preferable. Wood is plentiful, but water is scarce in the summer season.

Bay of Fair and False may contain several good anchorages, but it is so filled with small islands and rocks, that any description that could be given would be of no use to the mariner. A cluster of large islands extends off the frontage of this bay, fully 20 miles, or so far as Offer Gooseberry Island, having between them innumerable passages, with deep water. There is also a wide channel, running from Fair and False Bay, and Morris Island, to the northward, which leads to Bloody Bay, and then turns westward, and is divided into various branches, forming the N.W. arm, the

Middle arm, and the N.E. arm; this latter being a peculiar and extensive channel, running in one direction, southward, almost to Newman's Sound, and in another, almost to Damnable Harbour; all these are navigable, and afford places of good anchorage, and plenty of both wood and water.

There is also an open strait from Bloody Bay to the eastward, through Bloody and Cattel Reaches, and out to the northward of Offer Gooseberry Island. Other channels branch off to the northward from Bloody and Cattel Reaches, and between the Lakeman Islands running into Pitt Sound, Locker and Content Reaches, and thence to Freshwater Bay. Within these, and on the northern shore, are Hare, Locker, Trinity, Indian, and many other lesser bays, coves, and inlets, abounding with good anchorages, and calculated to afford shelter for shipping of all descriptions, in case of necessity. These are, at present, but little known, and frequented only by local traders; we shall, therefore, proceed to those which are the usual places of resort and are better situated for the purpose of fishing.

GOOSEBERRY ISLES, &c.—The Gooseberry Isles are a cluster of islets, near the middle of Bonavista Bay. The Offer or Outer Gooseberry is in latitude $48^{\circ} 56' 30''$ N., longitude $53^{\circ} 30' 30''$ W. From Cape Bonavista, to sail clear of the Eastern Rock, which lies at $1\frac{1}{2}$ mile to the E.S.E. of the Offer Gooseberry Isle, the course is N. by W. $\frac{1}{4}$ W., and thence to Copper Island (at the mouth of Greenspond Tickle) N. $\frac{1}{4}$ E.; here it is possible to obtain pilots for this and the adjacent anchorages, which are North-West Arm, New Harbour, and Cat Cove.

There is good holding ground between Greenspond Island and the main, but the water is so deep that a vessel is liable to drift on shore in the act of weighing, nor is there sufficient room to veer to a lengthened cable in heavy gales from the S.W., to which quarter it is much exposed. The course to Barrow Harbour from the eastern Gooseberry Rock is S.W. $\frac{1}{4}$ W. 18 miles: you thus avoid Malone Ledge, a shoal lying S. $\frac{1}{4}$ W., one mile from the rock (above water), which bears the same name: it has never less than 4 fathoms, so that in fine weather no danger need be apprehended.

Ships coming from the eastward, or round Cape Freels, have to avoid the Charge Rock, which lies S.E. $\frac{1}{4}$ S. $2\frac{1}{2}$ miles from Cape Freels' Gull Island; the rock has only 6 feet of water upon it, and is circumscribed by a large spot of rough fishing-ground, having from 8 to 30 fathoms. From Gull Island, off Cape Freels, you may run immediately for the *Stinking Islands*, taking care not to open Cape Freels eastward of the Gull, as this will carry you inside the danger. Keep a good look for the Mid-rocks, which are just above water, and lie 2 miles to the N.N.E. $\frac{1}{4}$ E. from the Stinking Islands; but a vessel not bound up the bay, is enjoined to keep well outside of them all, for should the weather become suddenly thick and foggy (which occurs frequently with an easterly wind), you will run a great risk of getting bewildered among the innumerable rocks for which this part of the coast is remarkable, and from which neither chart nor compass can direct the stranger. Three-quarters of a mile N.W. from Gull Island is a rock with 3 fathoms of water upon it.

In the winter months, when the north-easterly gales are very heavy and continuous, the sea breaks extremely high over several Spots of the Stinking Banks, which lie E. by N. $2\frac{1}{2}$ miles from the Stinking Islands. In two places there are as little as 7 fathoms on these banks, and, in such weather, although a vessel would not strike, she would be in very great danger of foundering in the tremendous sea which would be apt to break over her; but in fine weather no danger from them is to be apprehended.

Having rounded the Stinking Islands, and wishing to sail into *New Harbour* or Cat Cove, steer directly for the Offer Gooseberry Island, S.W. by W. $\frac{1}{4}$ W., until you bring Pouch and Flower Islands to touch each other; you will be then 2 miles outside the three rocks which lie at $1\frac{1}{2}$ mile to the southward of Flower Island. The outer of the three rocks has on it 3 fathoms of water, the middle 14 feet, and the inner only 11 feet. Now alter the course to W. $\frac{1}{4}$ S., keeping the white face of Chalky Hills, in Locker Reach, a little on the starboard bow, which will carry you clear of Copper Island dangers, lying without Shoe Cove Point; and should the roughness of the weather prevent you getting a pilot on board thereabout, you may continue this course until you bring Shoe Cove Point (which may be distinguished from its bearing a semblance to white marble) to bear N.W. $\frac{1}{2}$ W., when you may shape your course for Indian Bay W.N.W.

New Harbour is 2 miles to the westward of Shoe Cove Point. With easterly winds

it is quite inaccessible, from its narrow entrance; in which case you must continue onward for Cat Cove, lying 4 miles farther up the bay on the same side. *Cat Cove* is formed by Cat Island, and may be easily recognised, the island being the only part in the vicinity that is covered with live woods, the surrounding forests having been destroyed by conflagration. On steering for this place proceed between Silver Hair and Brown Fox Islands and main, and as you approach the latter, the channel narrows, and you keep Cat Island open on your starboard bow. Off the upper part of Cat Island lie two high green rocks, which you must round, the passage formed by them being too shoal to pass between; you may then run till you get some distance inside the upper point of the island, and anchor in from 5 to 13 fathoms, with the hawse open to N.W., the winds from that quarter being in general most heavy and squally. In working in, you may stand close to either shore, except off the point of the island, as there is a sunken rock within 100 yards of it, with not more than 10 feet of water.

North-West Arm, in lat. $49^{\circ} 7' N.$, is the best anchorage near Cape Freels, but its access is not without difficulty, from the multiplicity of islands that lie in the neighbourhood, and which are almost undistinguishable from their great similarity. The greatest danger you have to encounter, in making this place from the southward, is the Northern Rock, which lies N.E. $1\frac{3}{4}$ mile from Copper Island (known by its height and without wood); it has never less than 22 feet of water upon it; so that, in fine weather, vessels which generally frequent this coast may pass over it in perfect safety; but, in hard gales, the sea breaks over it incredibly high. To avoid it, be careful not to open Fool's Island, at the entrance of N.W. Arm (which is somewhat higher and more prominent than the rest, and is covered with trees, except the crown), to the westward of the Western Pond Rock, until you bring Butterfly Island to touch the inner point of Flower Island, or until Puffin and Copper Islands touch each other; then, leaving the Pond Rocks on the starboard hand, steer in for Fool's Island, which it is advisable to keep well on board, as there is a sunken rock lying exactly in mid-channel, between it and Partridge Island Rocks, with 18 feet upon it; to clear which, it is impossible to give a descriptive mark. The course then into the Arm is N.W. $\frac{1}{2}$ W., and as soon as you get inside Odd Island, you may anchor in muddy ground with from 7 to 9 fathoms, Fool's Island Hill bearing S.E. to S.E. by S. During the dry summer months, vessels are compelled to send to Loo Cove for water, nor is wood to be procured on this part of the coast within the distance of 12 miles.

Greenspond Tickle is a small harbour on the south-eastern side of Greenspond Island. The island is about a mile in breadth each way, and a reef of rocky islets runs off the southern part of it, all the way to Puffin Island. The harbour is of very little importance, not being capable of receiving vessels whose draught of water exceeds 14 feet; its dangers are the Northern, the Cook-room, and Harbour Rocks, but it is impossible to get in with a foul wind, or even with a fair one, without a pilot. Ships sometimes anchor between the island and the main; but the place is contracted, and the water is very deep, and it is much exposed to S.W. winds, so that it cannot be recommended as a place of safety. To sail into it, you must pass to the westward of Copper Island, in doing which you must cautiously avoid the Midsummer Rock, which lies one mile off W. by S. $\frac{1}{2}$ S. from that island, and has only 6 feet water on it: when you shut in Silver Hair Island with Shoe Cove Point, you are inside the danger. You should also give Newals and Ship Island a wide berth, as the water shoals off them to a considerable distance.

CAPE FREELS TO CAPE NORMAN.

CAPE FREELS consists of three points, the South Bill, the North Bill, and the Middle, or Cape Freels, about which there are many shoals and rocky dangers; therefore, a wide berth should be given them at all times. Over these points is some high land, commonly named the Cape Ridge, which is visible at a considerable distance.

About $6\frac{1}{2}$ miles N.N.W. $\frac{1}{2}$ W. from Cape Freels is the Outer Gat Island, which is connected to the main by a sandy reef, impassable for shipping, and forming the

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southern point of Deadman's Bay. A little before you come to the Outer Gate, you will see a remarkable hill named the Windmill Hill, and near it the Little Gat Island. In sailing to or from Cape Freels, the shore should have a good berth, although there are soundings all the way, decreasing gradually towards the shore. Deadman's Bay is formed by the Outer Gat Island to the southward, and Deadman's Point to the northward; the soundings within it are regular, and there are no rocks, except those close to the shore, but it is totally unsheltered, and open to all easterly winds.

PENGUIN ISLANDS.—Having passed Deadman's Point, you will approach the Penguin Islands, two in number, bearing from Cape Freels N. by W. $\frac{1}{2}$ W., distant 14 and 15 miles. Between them the passage is clear, with from $5\frac{1}{2}$ to 7 fathoms water, but vessels should not go within them and the shore, for there are several rocky reefs which render it particularly dangerous.

FUNK ISLANDS.—The Funk Islands, which lie N.E. by E. from Cape Freels, distant 31 miles, are a little group of rocks, just above water. The largest of them is not half a mile long, and cannot be seen farther than at the distance of 10 or 12 miles; but it will always be distinguished by the great number of birds continually hovering over it. About 200 yards north of the largest Funk Island is a large rock above water, and N.W. by W. 180 yards from this are still larger rocks; they are all barren, and only the resort of sea birds, that inhabit and breed there. Between these rocks are 18, 37, and 42 fathoms water, with a clear passage; but between the eastern rock and the largest island there is a dangerous sunken rock, of only 10 feet water, over which the sea generally breaks; near this sunken rock are 14 and 16 fathoms, and between it and the largest island, 30, 25, 56, 38, 24, and 17 fathoms. Off the western point of the largest island are some rocks, and at its eastern part a sort of creek with 5 fathoms in it. A ledge of rocks is reported to lie S.W. from Funk Island, at the distance of 7 miles. A Correspondent of the *Nautical Magazine* writes: "About the latter part of November (1850), there was a high sea from the N.E., during which they (a party of seamen on the island) observed a great number of shoals, which were counted, and found to amount to 23, continuing nearly round the island, a small arc of $33^{\circ} 45'$ only (from W. by N. to N.W.) being clear. Upon a close observation, the principal of these shoals, and the most dangerous, as being farthest from the island, and therefore less liable to be apprehended, was seen to break about 2 miles from the shore, bearing S.W.; the rest showing an almost continual breaking three miles in extent from the island."

Between Funk and Wadham Islands a dangerous rock was discovered on the 28th September, 1836, during a gale and very heavy sea, by Captain Evan Percy, in the brig *St. John*. Heavy breakers were distinctly seen upon a rock bearing W. $\frac{1}{2}$ S. a little southerly, about 7 miles from the Funk Islands. The bearing was taken in a fine clear evening, and it was the opinion of all on board that the rock, though not appearing above water, would take up any vessel. The position given to it is about latitude $49^{\circ} 41'$, longitude $53^{\circ} 15' W.$; but the channel between Wadham and Funk Islands must be cautiously used, as the exact position of this rock cannot be depended on.

A rock is said to lie 7 miles N.N.W.* from Funk Islands, and a shoal, named the *Cleopatra*, is said to lie N.W. by W. $\frac{1}{2}$ W. 20 miles from Funk Islands, and about 11 miles to the eastward of Fogo Island; but both these latter positions are doubtful.

Durel's Ledge, or Snap Rock, is a dangerous reef, said to lie about 7 leagues N.W. by N. from Funk Islands, and to cause the sea to break over it continually. Nearly N.W. by W., distant 3 leagues from Durel's Ledge, is another danger named Cromwell's Ledge, which is supposed to bear E.S.E. $\frac{3}{4}$ E., distant 10 or 11 miles, from Little Fogo Islands.

RAGGED HARBOUR.—This harbour lies to the north-westward of the Penguins, distant 6 miles. The mainland hereabout is low and sandy, and the passage from the eastward rocky and dangerous; it should therefore not be attempted by a stranger, or without a pilot. North-westward is Ladle Cove Island, and 7 miles beyond that is Rocky Bay, which lies in about latitude $49^{\circ} 25' N.$ and longitude $54^{\circ} 10' W.$ At its entrance lie three islands, Noggin Island, Green Island, and farther in, White

* Mr. Bursell, of *St. John's*, says, in 1860, "Most of the dangers marked doubtful off Funk Island exist, especially that to the N.N.W., about 7 miles distant, and called a 'breaking ledge'; I have seen it break in heavy weather."

Island. You may pass between each of these islands in 7 fathoms; between Rocky Point and Green Island in 7, 8, 13, or 10 fathoms; between Green and White Islands in 13 and 14 fathoms; and between Noggin Island and the western point of the bay in $3\frac{1}{2}$, 7, 12, 9, and 4 fathoms. The bottom of these bays, for there are three openings, is rocky, and vessels cannot go far into them.

WADHAM ISLANDS.—These consist of a cluster of islands in about $49^{\circ} 35'$ N., lying to the northward of Cape Freels, and are separated from each other by channels more than 1 and $1\frac{1}{2}$ mile wide. The largest, named Peckford, is about $1\frac{1}{2}$ mile long, and lies in the direction of N.E. and S.W., and bears from Cape Freels nearly N. $\frac{1}{2}$ W., distant 21 miles. From its southern part towards the land about Ragged Harbour, there are a number of rocky islets and reefs, with channels between them, rendering the navigation of this part extremely hazardous. About $1\frac{1}{2}$ mile N.N.W. $\frac{1}{2}$ N. from Peckford Island is White Island, but a passage between them should not be attempted, for there are several small rocks lying off the north and north-western part of Peckford Island, some of which extend over almost as far as White Island. N.W. by W. from the north end of Peckford Island, about $4\frac{1}{2}$ miles, is Copper Island. Duck Island lies W.N.W. $\frac{1}{4}$ N. $2\frac{1}{2}$ miles from the same part of Peckford Island, and about $1\frac{1}{2}$ mile S.S.E. $\frac{1}{2}$ E. from Copper Island. There are also some small rocks lying off the N.W. end of Duck Island, which, being visible, can always be avoided with ease.

Offer Wadham, the outermost and easternmost of the group, is distinguished by a circular brick tower, in lat. $49^{\circ} 36\frac{1}{2}'$ N., and long $53^{\circ} 46'$ W., from which a fixed light is shown, at an altitude of 96 feet above the level of the sea, visible in clear weather at a distance of 12 miles. The S.S.W. rock is above water, bearing from Offer Island S.S.W. $\frac{3}{4}$ W. $2\frac{1}{2}$ miles, and has near it 13, 17, and 21 fathoms. About three-quarters of a mile W. by S. from the lighthouse is a small flat island. There is also a rock lying S.E. $\frac{1}{4}$ E. from Offer Island, distant about $1\frac{1}{2}$ mile, named the *E.S.E. Ground*; this is dangerous, and must have a berth in passing either north or south of it. The Tom Cod Rock, likewise dangerous, lies $\frac{3}{4}$ of a mile S. by W. from Offer Island.

FOGO ISLANDS lie to the north-westward of the Wadham Islands. Great Fogo is 4 leagues long and 9 miles broad: off its south-western point lie the Indian Islands, and N.E. by N. $3\frac{1}{2}$ miles from the body of Great Fogo, are the Little Fogo Islands. Numerous other rocks and small islands are scattered about them.

Fogo Harbour lies on the north side of the island; it is considered good for the fisheries, but its entrance is dangerous and difficult. There is a strong current running south-eastward, especially with a westerly wind, to guard against which as much as possible you should hug Fogo close on board, until you open the entrance, which is narrow; having found this, run directly in, keeping right in the middle, and you will carry 8, 6, and 4 fathoms throughout; this is named the West Tickle. When you are through, if intending to anchor in the western bight, you must steer south-eastward until you bring the point between the height N.W. by W. to avoid the Harbour Rock, which seldom appears except at low water, spring tides; then haul up to the westward, and anchor in from 6 to 5 fathoms, good ground and well sheltered.

Vessels from the eastward, and bound to Fogo Harbour, should avoid the Dean's Rock, a sunken danger lying between Joe Batt's Point and the harbour. Steer W.N.W. until Brimstone Hill, a remarkable round mountain, appears in the centre of the harbour; then steer for the East Tickle, which may be known by the lantern on the top of Sim's Island, making the west side of the Tickle. Give a good berth to the point on the starboard side, and run right up the harbour, keeping near the south side, and you will carry from 5 to 3 fathoms through. Immediately you get round the point, steer S.W. to avoid the Harbour Rock, and follow the directions given above for anchoring. The Middle Tickle appears the widest, but it is fit only for boats; either of the other two must be adopted as best suits the wind.

The Little Fogo Islands are nearly surrounded by rocks, both above and under water, making this part of the coast extremely dangerous. To the eastward of Little Fogo, is a small rock just above water, named the North-Eastern Rock, and somewhat in this direction, distant 10 or 11 miles, is said to lie Cromwell's Ledge, whose exact position is not well determined, although it is considered to be extremely dangerous. Northward of Little Fogo are the Turr Rocks, and hence, in the direction of the western side of Great Fogo Island, are the Storehouse Rocks, the Seals'

Nests, Gappy and Stone Islands, the Jigger and Black Rocks, and various other dangers, all having deep water round them, which increases the difficulty of the navigation.

Ireland Rock lies about 4 miles nearly E.N.E. from Little Fogo Islands. It is the north-easternmost of the Fogo Reefs, and the sea always breaks on it. The reefs extend nearly 13 miles in a westerly direction from Ireland Rock to Fogo Head Rock, which lies about a mile north-westward of Fogo Harbour. Between the reefs and islets are several deep-water channels, which might be taken by those well acquainted. At the distance of 4 miles S.E. by S. from the Little Fogo Islands, and 5 miles eastward of the N.E. part of Fogo Island, lie the Barrack Rocks, which extend N.W. and S.E. fully a mile, and part of them are above water. At the distance of 2 miles south-eastward of the Barrack Rocks, and $7\frac{1}{2}$ miles N.E. $\frac{1}{2}$ E. from Cape Fogo, is situated the Inspector Rock, on which the sea generally breaks.

CHANGE ISLANDS TICKLE.—This harbour is very secure, and has good anchorage, with 6 or 7 fathoms, muddy bottom. The islands about it are, generally, low and marshy, but abundance of fire-wood may be procured, though water is scarce. The passage in is between the Ruth's Rock and the Tobacco Islands, the mark being Brimstone Head kept between both, which will clear all the dangers on the northern shore, and also off Skinness Harbour; or you may bring the Tickle to the westward, between the points, and steer directly through in safety.

TOULINGUET ISLAND.—This island lies to the westward of Fogo, and has several small islands about it. Here is situated what is named Toulanguet Bay; and to the south-westward of Toulanguet Island, is the Harbour of Herring Neck, which is said to be a spacious fine harbour, and fit for any vessels.

From Toulanguet Bay to Cape St. John, the course is N.N.W. $10\frac{1}{2}$ leagues.

CAPE ST. JOHN is a high rugged point of land, situated in about lat. $49^{\circ} 58'$ N., and long. $55^{\circ} 30'$ W., and may be readily known by the small round island to the eastward, distant from the northern pitch of the cape about 5 miles. This is named the Gull Island, and is the third of that name on this side of Newfoundland. Cape St. John is the point where, by treaty, the French fisheries begin; their boundary continues thence northward and round the western coast, as far as Cape Ray.

At nearly two miles to the southward of Cape St. John lie the Bishop Rocks, over which the sea breaks in bad weather. There are several fishing harbours on the coast to the southward of the cape, particularly Shoe Cove, Tilt Cove, and Snook Harbour; the latter the best with south-easterly winds.

There are said to be various deep bays and inlets between the Fogo Islands and Cape St. John, but their particulars are very little known, although there can be little doubt that the Great Bay and River Exploits, and the Bay of Notre Dame, afford many places of good anchorage, and of easy access, which when fully explored, may become hereafter frequented, better understood, and prove highly beneficial.

Rounding Cape St. John, and at about 5 miles to the westward, is the harbour of La Scie, to sail into which there is no danger whatever, but it is open to winds from the N.N.W., which send in a heavy sea. The best holding ground is just within a little cove on the starboard side, in 15 fathoms, muddy bottom; but the ground is not good farther in.

GREAT ROUND HARBOUR is a good and convenient place for vessels engaged in the fishing trade; there is no danger in sailing in or out of it, both shores being bold-to. The anchorage lies within the two inner points, where vessels may ride in 4 or 5 fathoms water; secure from the weather, and entirely land-locked. Little Round Harbour, which lies round a point to the north-eastward, about $1\frac{1}{2}$ mile distant, is merely a cove, and totally unfit for shipping.

PACQUET HARBOUR lies about 5 miles N.W. by N. from Great Round Harbour; its entrance bears from the channel between the Horse Islands, nearly S.W. by S. It may be known by its southern head, which is a high and rocky mountain; the northern head is somewhat lower, and there are three rocky islets lying directly off its point. Both points are bold-to, but a little to the southward of the rocky islets, is a small shoal with $2\frac{1}{2}$, 3, and 4 fathoms upon it; the channel between it and these three rocks has 7, 8, and 9 fathoms, and the water across the entrance is from 8 and 9, to 19 and 20 fathoms. A similar depth continues more than a quarter of a mile in, where the harbour divides into two channels, the one running northward, the other West and South-West.

The northern arm is about one quarter of a mile long, and has 20, 18, and 19 fathoms at its entrance, becoming shallower as you advance. Vessels running in here should keep the starboard shore on board; for about two-thirds up the channel, on the port side, there is a rocky shoal, a small part of which occasionally appears above water; on the other part of this shoal are from 3 feet to 4 fathoms. Having passed this shoal, steer up mid-channel, and anchor in 5, 7, or 8 fathoms; the northern part near the land becomes shallow, and a rivulet here falls into the bay, which is said to issue from some extensive lakes about two miles inland. The south-western channel is somewhat narrower than the northern one, but is quite free from danger; the shores on both sides are steep-to and bold, and you will have 12, 10, 9, 8 and 7 fathoms for half a mile in; it then shallows to the head of the bay, where there is a sandy beach and a river running southward. This is a snug and secure place for vessels to run into whenever occasion may require. To the northward of the northern point is a mountain, named Signal Hill, usually having a signal-post upon it, and serving to point out its situation.

The entrance to Pacquet Harbour should not be attempted when the wind is between N.W. and S.W., as the squalls off the land are then both heavy and changeable; and to miss stays when in the narrows would be dangerous. If apprehensive of bad weather, it would be better to make for Round Harbour. Mings Bight and Verte Bay lie to the westward, but although the anchorage is good, they are but little frequented.

ST. BARRÉ, or HORSE ISLANDS.—These are situated nearly midway between Partridge Point and Cape St. John, and consist of two moderately high islands. There is a rock above water lying northward of the easternmost island, distant $1\frac{1}{4}$ mile; and on the east side of the same island are some sunken rocks which stretch out in some places near a mile from the shore. At the S.E. part of this island there is also a small cove, fit only for boats. There is a safe channel between the islands, of from 40 to 48 fathoms water, black mud, but it is seldom attempted. The eastern island is the largest.

About 3 miles N. $\frac{1}{4}$ E. from Pacquet Harbour lies *Hardy Harbour*, having Wood Island lying before it. Fishing is carried on here, but with strong sea winds it is inconvenient. To the extent of nearly 2 cables off, the north side of Wood Island is rocky. Five miles north-westward of Wood Island lie the Mings Islands, which consist of two large rocks, lying off the N.W. point of Mings Bight, having a passage between. Two miles N. by W. of the Mings Islands lies the Sisters' Rock, on which the sea always breaks. A dangerous rock lies about three-quarters of a mile to the northward, with only 3 feet water on it. These latter rocks lie near the centre of the entrance to Green or Verte Bay.

Fleur de Lys Harbour lies northward of Mings and Verte Bays, and about 3 miles to the south-eastward of Partridge Point, and derives its name from three remarkable hillocks just over it. It is small, safe, and secure from all winds; and excellent anchorage, in 4 fathoms water, may be found in its N.E. arm. A rocky shoal lies 100 yards off the island, to avoid which you must borrow towards the eastern shore until you get Bluff Head open of the island. There is plenty of wood, but the water becomes scarce in a dry season. It is, however, very conveniently situated for the fisheries, and is commonly frequented by French vessels.

WHITE BAY is a large and extensive arm of the sea, being at its entrance, from Cape Partridge to Cat Head, fully 6 leagues wide, and running in a south-westerly direction, about 15 leagues, to its upper end, where it is contracted to a river's mouth, $1\frac{1}{2}$ mile wide. In this bay or gulf are several islands, coves, and inlets, affording both anchorage and shelter.

Lobster Harbour lies about 4 leagues southward of Partridge Point, and is a small round harbour, with a shallow narrow entrance, having at low water, in some places, not above 8 or 9 feet water; but when you are once entered, you will have 12 and 13 fathoms all over the harbour. Small vessels, therefore, sail in, commonly, at the flood tides. It is high water here, on the days of full and change, at about 6h. 45m.; springs rise 6, neaps 4 feet.

Southern Arm lies about 5 miles from Lobster Harbour, and farther up the bay. Here a ship may anchor with great safety, in 17 fathoms water, about 3 miles within the heads; but there is also good anchorage in any part below this, and before you are advanced so far up, in 20 and 25 fathoms. A little above the inner point,

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on the northern side, is a muscle bank, which stretches quite across the arm, and nearly dries at low water; and when you have passed this you will have 11 and 12 fathoms water, and the channel continues deep until you approach the river's head. This is the first great inlet on this side of the gulf, and may, therefore, be readily recognised.

Middle Arm lies about $1\frac{1}{2}$ mile W.S.W. from the Southern Arm; at its entrance is a rocky island, which is joined to the shore by a shoal, over which are 1 and 2 fathoms water. This inlet runs in to the southward, about 3 or 4 miles. To enter it, you will do well in keeping the port shore on board; it is fitted only for small vessels. Two leagues W. by S. from Middle Arm is Hawling Point; and between them lie the Pigeon Islands, about which the ground is good for fishing.

WESTERN ARM lies S.E. of Hawling Point, and runs up about 3 miles; here large vessels may anchor in from 14 to 16 fathoms water. There is a cove on each side just within its entrance; that on the north side is named *Chance Cove*, and affords secure anchorage for a good-sized vessel; when in, it is entirely land-locked. In entering without a pilot, leave a small islet in the mouth of the cove on the port hand; you will thus carry a depth of 5 or 6 fathoms, whereas in the other passage are not more than 8 feet. The other is named Wild Cove, a very indifferent anchorage, open to the north-westerly winds and the bottom rocky and foul.

About 5 leagues down from the river's head, and near the S.E. side of the bay, lies Granby's or Mid Bay Island, without either cove or place of shelter. On the south-eastern part of this island is a shoal running off, the length of 2 cables, with not more than 9 feet water over it; and nearly abreast of this island, on the S.E. side of the bay, is Purbeck Cove, where shipping may find safe anchorage, and lie with good convenience for the fisheries.

Having passed southward of Granby's Island, the bay narrows and runs up about 5 leagues towards Gold Cove, where the river branches out into several streams, and is commonly named the River's Head.

SOP'S ARM.—On returning up the western side of White Bay, you will perceive Sop's Island, about 3 miles in length, and 11 miles in circuit; near its western end is Goat's Island. These form a long passage, or arm, named Sop's Arm; at the northern part of which a vessel may safely anchor, just inside the north side of Sop's Island; this will be the best side of the channel or passage into the arm; but there is anchorage in deep water between Sop's Island and the main, before you reach so far up as Goat's Island. There is also a small cove at the north end of the island, named Sop's Cove; and two other coves opposite the main, named Hart's Coves, in all which the fisheries are carried on, although ships generally anchor in the upper part of the arm and inside of Goat's Island.

Between Sop's Island and Goat's Island is a small islet with a conspicuous tuft of trees upon it. A depth of not more than 5 or 6 feet can be carried through the passage eastward of this islet; vessels, therefore, must take the passage between the islet and Goat's Island, if having an occasion to use this route.

Jackson's Arm lies about $3\frac{1}{2}$ miles to the northward of Sop's Island, to enter which you will pass a ragged point, low and round: the water here is deep, except in a small cove on the starboard side, where a vessel should moor head and stern. This place affords the largest timber in White Bay. Frenchman's or French Cove is about 2 miles to the northward of Jackson's Arm, and offers good and safe anchorage.

At about 4 miles to the north-eastward of Frenchman's Cove is Coney Arm Head, the most remarkable land on the western side of White Bay, and bears W. $\frac{1}{2}$ N., distant $8\frac{1}{2}$ leagues from Cape Partridge. The land here projects out $1\frac{1}{4}$ mile, forming a deep bight, named Great Coney Arm. In this place there is no good shelter for shipping; but in Little Coney Arm, which lies to the westward of the head, is convenient anchorage for small vessels, although its entrance is too shallow for large ships; here fishing-craft frequently rendezvous.

Cat Arms.—About $10\frac{1}{2}$ miles north-eastward from Coney Arm Head lies the Great Cat Arm, and 2 miles farther is Little Cat Arm. In Great Cat Arm the depth of water is from 37, 35, 29, 27, 24, 20 to 15 fathoms, at the end of the arm, where it is quite safe, and sheltered by the land. At the end of the north point lie some rocks, which are above water; to avoid them, keep quite close to the south shore; but in going into Little Cat Arm, it is better to keep on the north side, as

there is a rock near the land on the opposite side. The entrance to this arm is narrow, and there will be found in it a depth of 22, 9, and $3\frac{1}{2}$ fathoms; the least depth of water will be found on the south side of the harbour, within the points.

Little Harbour Deep is much exposed to south-easterly winds, and by no means a good harbour; off its northern point are some rocks, always above water, which lie half a mile from the shore, and afford good fishing about their environs. The water is not very deep in any part of this inlet, and when you get up half-way from the entrance to the head, or farther end, it becomes quite shoal.

Grand Vache is an inlet about $1\frac{1}{2}$ mile deep, lying 1 mile from Little Harbour Deep. It is also open to the southerly winds, and may be known, when near the shore, by the northern point appearing like an island, and bearing N.W. $\frac{3}{4}$ N. from Cape Partridge; it is but an indifferent place for shipping, and seldom frequented. Hence, 7 miles in a north-easterly direction, is Orange Bay.

Orange Bay, or Great Harbour Deep, may be known from any other inlet, by the land at its entrance being much lower than any other land on the north side of White Bay, and by its bearing N. $\frac{3}{4}$ W., distant $5\frac{1}{2}$ leagues, from Cape Partridge; it forms a large harbour, and when you get about 3 miles within its entrance, divides into two branches. In the northern arm the water is too deep for vessels to anchor, until they have run up near the head; but in the western arm there is no anchorage, having 50 fathoms near its head. A little within the entrance of Orange Bay, there is a cove on each side, frequented by the fishing-vessels; but these are very dangerous for a ship to lie in, for although they moor head and stern, yet should a gale come on from the eastward, there is little safety to be depended upon.

Fourch  s.—Proceeding about 10 miles along the coast you will arrive at Fourch  e, a place little frequented, and having no anchorage until you approach its farther end, where you will find a cove on the northern side. This cove is 2 or 3 miles above the entrance, and very small vessels may anchor there in 18 fathoms, mooring head and stern. The land on both sides is extremely high and steep to the shore. There is also another arm running in about 2 miles farther than the cove, but it is so narrow, and has such a depth of water, that it is almost useless to shipping.

About 5 miles to the north-eastward of Fourch  e, and nearly 6 miles to the south-westward of Canada Head, lies the entrance to Hooping Harbour, or Sans Fond. It has two arms or bays, the one running up northward, the other westerly. Captain Bullock recommends, as safe anchorage, near the head of the northern arm in 6 fathoms, although open to the southward; yet the western arm is more sheltered, and the water is much deeper, having 16 to 24 fathoms near its head. The entrance of this harbour lies nearly N.N.E. $\frac{1}{4}$ E., distant 27 miles from Partridge Point.

About 6 miles N.E. by E. $\frac{1}{4}$ E. from Hooping Harbour lies Canada Head. It is elevated land, and very easily distinguished either from the northward or southward; but when directly to the eastward of it, it becomes difficult to recognise it from the high land up the country at its back.

CANADA BAY is an inlet of considerable size and extent, having at its southern entrance Canada Head, from whence it runs N.N.-Easterly fully 4 leagues; here vessels caught in easterly gales may seek shelter, and anchor in safety. In entering, when you get above the two rocky islets which lie near Bide's Head, and named the Cross Islands, you will see a low white point, and another black one a little beyond it; off this latter, distant 2 cables' lengths, lies a sunken rock; keep, therefore, towards the middle of the bay, and you will find no danger, except a rock above water, which lies about a mile below the point of the narrows; this you must endeavour to leave on your port hand, keeping mid-channel, and you will have 10 fathoms through the narrowest part. Soon after you have passed the narrows, the bay widens, and is above a mile across, and you may then anchor in from 18 to 20 fathoms, good holding ground, and secure from all winds; but this bay is not much frequented, and only occasionally resorted to in case of necessity.

Engle   Harbour is situated on the north side of Canada Bay. To sail into this place you must pass a low point, appearing white, and forming the northern point of entrance to Canada Bay; then keep near the shore until you get abreast of the next point, which makes the harbour; haul round to the S.E., taking care not to come too

near the point, for it shoals a full cable's length off. Having so far advanced, you can anchor in from 15 to 7 fathoms, good holding ground; but this is well up the cove, which is too small to lie in, unless you moor head and stern.

Mr. R. Bursell, of St. John's, in a letter to the *Mercantile Magazine*, in 1860, makes the following remarks upon Canada Bay:—"The rock off the south end of the promontory (White Point, forming the north side of the entrance) is laid down too near the shore; there is a good passage between it and the main for any large vessel; but ships not taking this passage, must give White Point a good berth—not approaching nearer than $\frac{3}{4}$ of a mile, as the rock is upwards of $\frac{1}{2}$ of a mile from the point. Fishermen told me, that at times there are only 9 feet of water on this rock. I sounded all round it and found from 14 to 18 feet. At Englée, three rocks, marked on the chart in the anchoring ground on the north-east of the island, between it and the main, do not exist. Several large French brigs lay there the last time I visited it. There are a few rocks off the northern point of Englée,* but so close in shore as not to affect the navigation of the channel."

In Bide's Arm, which runs up N.N.E. from Englée, almost 2 leagues, there is no good anchorage, the water being too deep; but within the south end of Englée Island is a good harbour for shallows, although thence to where the ships lie, there is no channel, even for boats, unless at high water, or beyond half-tide.

Goufre Harbour lies in the S.W. corner of the bay, about 2 miles westward of Canada Head, and 3 miles from the north point of the entrance. In this harbour, which runs in S.W., nearly a mile, is good safe anchorage, in 15 fathoms, well sheltered from wind and sea. Canada Harbour is the first on the port hand within Canada Head; here is a fishery establishment.* As it is unsafe with N.E. winds, the ships anchor in Goufre, and only use this harbour with boats.

Conch Harbour bears nearly E.N.E. $\frac{1}{2}$ E., distant 11 miles, from the entrance of Canada Bay; it lies very open to the winds from the southward, but has good anchorage well up to the head, in 11 fathoms water, good holding ground. S. by W. from Conch, distant 2 leagues, is *Hilliard's Harbour* (named *Botitot* by the French), which is a bad place for shipping, but very convenient for the fishing craft.

Cape Rouge Harbour lies E.N.E. from the harbour of Conch, and bears N.W. by W. from the south end of the island of Groais, distant 3 leagues: its northern part is named Cape Rouge. Shelter from the heavy swells of the Atlantic is afforded by Groais and Bell Isles. It is shallow and rocky in the southern part of its entrance, and the harbour shoal lies in the S.W. arm. The best anchorage is in the northern arm in any depth of water. Ships may beat in or out, but there is no anchorage in the centre of the harbour, as it is too deep. A small island, named Rouge Island, lies directly opposite its entrance; its northern end requires a berth in passing.

BELL AND GROAIS ISLANDS.—These islands lie off the N.E. coast of Newfoundland, from which they are separated 9 or 10 miles. Bell Isle is the southernmost and larger island, being 9 miles in length and 6 broad; there is a little harbour at its south part, where fishing craft occasionally resort, but not calculated for shipping: other coves may be found about the shores of the island, where shallows sometimes take shelter. Off its western side lies Green Island, a small rocky islet with a rock $\frac{1}{2}$ of a mile westward of it; and from the southern side a bank of soundings extends with 12, 20, 25, and 30 fathoms. There are some rocks, both above and under water, at the south point of Bell Isle; some of these lie 2 miles from the land. The south rock, above water, lies 2 miles S.W. from the south point of the island, and a sunken rock lies one-third of a mile S.W. of it; this is the southernmost rock. About $1\frac{1}{4}$ mile E. $\frac{1}{4}$ N. from the N.E. Rock, which lies off the north-east end of Bell Island, is a small and steep shoal of 10 feet, that requires care to avoid.

Groais Island lies to the north-eastward of Bell Isle, and is about 7 miles in length, and $3\frac{1}{2}$ miles broad; its northern point lying in latitude $50^{\circ} 59'$. Off this end, and also off the N.W. part of the island, are several rocks above water; otherwise this island is bold all round, and between it and the main are from 20 to 70 fathoms water. The channel between it and Bell Isle is 5 miles wide, and in it there are from 40 to 58 fathoms, dark mud and rotten shells. In order to clear the

* About $\frac{1}{2}$ a cable's length from the north end of the island, there is a rock having only 2 feet of water on it:

rocks lying off the N.W. point of the island, the N.E. point should not be brought to the southward of S.E.

CROC HARBOUR, the central point of the French station, is easy of access, although somewhat difficult to discover, particularly when making the land directly from the eastward; it is well provided with wood and water. When the north part of Bell Isle is clear of the southern part of Groais, you will be a little to the southward of the harbour; and this mark will not fail to point out its situation, especially as the headland, forming the southern shore, is bare of trees, and has a round appearance. The rocks off this headland will also help to distinguish it.

The entrance is about two-thirds of a mile wide, between Cape Vent (*Wind*) on the south and Cape Groux on the north, with a depth in mid-channel of 18 to 20 fathoms at low water, sand, gravel, and rock. At the foot of Cape Vent, just outside the harbour, are two rocky islets, having a passage between them fit for boats; the outer rock is clean close-to, so that a vessel may pass pretty near it, there being 6 to 8 fathoms a short distance off.

When within the harbour, the south shore will be observed to run first W. by N., and then to the W. by S., forming the S.W. bay, which is seldom used, on account of being exposed to North and N.E. winds; yet small vessels, drawing 9 to 10 feet water, occasionally run up to the head of the bay, and anchor between the islet and small fishing-station of Petit-Maitre, opposite the stage, but it is necessary to moor fore and aft. A little within the entrance of the bay, on its western side, is a rock above water, named the Folle or Baleine (*Whale*) Rock, on which the sea always breaks; in sailing up, it must be left to starboard, and as soon as passed, you must bear over to a small bay, named Bière Cove, to avoid a breaker which lies in the direction of the islet; after this, steer between the islet and Petit-Maitre. From the entrance of the S.W. bay the harbour runs N. by W., and after a short distance divides into two arms, one named the Fond, running to the northward, and the other Epine-Cadoret, towards the south-west.

There is anchorage in any part of the harbour, on a bottom of dark slate-coloured mud, and soundings of 22 to 9 fathoms; but all parts of the bay are not considered to be equally good. The best anchorage is considered to be at the entrance of the Fond, in 18 or 19 fathoms, clayey mud, well protected from easterly and westerly winds; at this position Cape Vent is concealed by Point Genille. With a strong breeze from the N.W. it is difficult for a large vessel to tack so as to reach this anchorage, in that case it is prudent to anchor near Point Groux, the north side of the bay, on a rocky bottom of 18 to 20 fathoms (34 mètres), and to wait until the breeze moderates, so as to allow you to come more within. There is also anchorage in Epine-Cadoret, but it is seldom necessary to go so far in.

The strongest winds are those from the south-west and north-west, which are generally squally. North-easterly winds are also prevalent in bad weather, but they never cause a very heavy sea. In Epine-Cadoret, just after passing a narrow creek, almost dry at low water, there is a convenient place on the rocks to heave a vessel down to careen, where the French ships, *Olivier* and *Philomèle*, were hove down, and the rocks prepared for the rigging and a capstan. The soil here is said to be wet and spongy, being composed principally of decayed vegetable matter, and covered with the dwarf pine indigenous to the country, which does not attain any great dimensions, the largest tree being not more than $1\frac{1}{2}$ foot in diameter, and the wood, when full grown, of but little value.

The shores of Croc Harbour are bold-to. A frigate can tack in, but great attention must be paid to veer in good time, as, under the land, the wind is uncertain, and frequently takes aback at the moment of tacking, particularly when it is from the N.W. and in squalls.

When leaving Croc Harbour, and proceeding to the northward, after passing Point Groux, two black rocks are seen close to the shore, named the Ravens. Hence to Irish Island, a black barren rock, very abrupt, the land runs E. by N. $\frac{1}{2}$ N., $2\frac{1}{4}$ miles, and thence towards the N.E. to the south-west point of St. Julien Island, at the entrance of the harbour of that name.

The harbours of Great and Little St. Julien and also that of Grandaway are all adjacent to the Island of St. Julien, and bear north-westward from the northern part of the Island of Groais. The south-west end of the Island of St. Julien is but little separated from the main, and cannot be distinguished to be an island until very

near it; there is at this end no passage, except for boats; therefore, to sail into either of these harbours, you may keep close to the north-east end of the island; and in passing that, the harbours will open to your view.

Great St. Julien is the easternmost harbour, to which there is no danger until you get within the entrance, when you will find the starboard shore to be shoal, nearly one-third over; but when you have passed the first stages, you may anchor in from 8 to 4 fathoms water.

To sail into Little St. Julien, you must first steer for Great St. Julien Harbour, in order to clear a sunken rock, which lies directly before the harbour's mouth; and having arrived opposite the entrance of Grandsway, run into the harbour, and anchor in 5 or 4 fathoms water. It is necessary for all ships using either of these harbours, to moor both head and stern. Grandsway is not a harbour for shipping, although it is very convenient for fishing craft.

FICHOT ISLANDS.—These consist of about fourteen small islands, lying in a N.E. by E. direction, and occupying thus a space of $3\frac{1}{2}$ miles. The largest and southernmost is about 3 miles N.E. $\frac{1}{2}$ E. from St. Julien Island, and separated from the shore by a channel $\frac{1}{2}$ a mile wide, in which is a depth of 9 to 18 fathoms; in the southern part of this channel there are some rocks nearly even with the surface of the water, so that its navigation requires the utmost care. About and among the islands are many reefs under water, rendering some amount of local knowledge necessary when sailing in their vicinity. Vessels frequently run through the passages formed by the islands, keeping as much as possible in mid-channel; but a stranger should not attempt to pass between the northernmost of the group and the small islet on its north-western side (the Grand and Petit Cormorandiers), because there is a rock almost awash exactly in mid-channel.

There is an excellent harbour for small vessels on the north-east side of the southernmost and largest Fichot Island, which harbour is sheltered from the eastward by numerous small islets, all more or less joined together by a rocky ledge. As strangers cannot enter the harbour without having the assistance of a pilot, it is useless to give instructions for it. Suffice it, then, to say that when inside there is protection from all winds. There are two passages into the harbour, the northern and southern; of these, the southern or Flag Pass is very shallow, and will only admit vessels of the smallest size. Cape Croix, on the eastern side of the harbour, is in lat. $51^{\circ} 11' 2''$ N., and long. $55^{\circ} 43' 3''$ W.

Grandes Ilettes Harbour.—On the west side of the southern entrance of the channel separating Fichot Islands from the main, there is a small harbour named Grandes Ilettes, on the northern side of which vessels may anchor in a good depth of water, and be well sheltered from most winds. The best position is midway between Chanbert Island and Admiralty Cove. Fronting the harbour, on its north-eastern side, there are a number of islands, which form the two harbours Four and Petites Ilettes.

HARE BAY.—The entrance of this bay is about 5 miles wide, and is formed by Cape Goose on the north and Fichot Islands on the south; thence it extends north-westerly about 6 leagues to the Northern Arm, and is about 6 miles in width. There are several good harbours within it, but they are not much frequented. The south side of the bay is bordered by rocks and islets; the northernmost and most remarkable are the Spring and Brent Islands. The Spring Islands lie on the south side, 6 miles within the entrance of the bay, and the Brent Islands lie 4 miles farther. The Southern Arm runs in about S.W. by W., 5 or 6 miles, from the eastern side of the Brent Islands, where good and well-sheltered anchorage may be found in 10 or 12 fathoms; good anchorage may also be found to the westward of the southernmost of the Brent Islands, in 5 or 6 fathoms. The north side of the bay is all clear and safe. How Harbour lies on this side, $11\frac{1}{2}$ miles from Cape Goose.

How Harbour is by far the best in Hare Bay, and has safe anchorage in every part. The entrance to it lies $11\frac{1}{2}$ miles N.W. from Cape Goose, and N.E. by N. $3\frac{1}{2}$ miles from the eastern part of the Brent Islands. To the northward a range of marshes and ponds extends as far as Pistolet Bay. The harbour is about $1\frac{1}{2}$ mile long, and nearly half a mile wide. Off its western point a small rock lies, but it is very near to the land. The upper part of the harbour shoals gradually, but in the middle of the harbour are 10 fathoms.

Goose Harbour lies on the western side of Cape Goose. It is small, but very

secure, and possesses excellent anchorage in 4 and 5 fathoms. Vessels can sail in with a westerly wind; and we believe that there are rings to assist vessels warping in with a contrary wind. Vessels generally moor head and stern in this harbour. Cape Goose is one of the most remarkable points on this coast, and is visible at a great distance. It lies in latitude $51^{\circ} 17' 20''$ N., and in certain positions it appears like an island. There are three remarkable mountains near Cape Goose, and further in the interior are the Capillaire Mountains, which are of a great height.

Cremallire Harbour lies about 2 miles northward of Cape Goose, and is spacious and good, having excellent anchorage in 7 or 8 fathoms water. It is supplied with abundance of wood and water, and is a good harbour for men-of-war to put into. Between Notre Dame Island and the port side of the entrance there is a shoal in coming from the southward, which may be easily avoided by keeping near mid-channel.

ST. ANTHONY HARBOUR.—Eastward of Cremallire Bay lies St. Anthony Harbour, which is a safe place, having good anchorage in 6 or 7 fathoms water, on a bottom of blue clay. Its entrance lies N.W. by W. $1\frac{1}{2}$ mile from Cape St. Anthony, and cannot easily be mistaken, from the remarkable high land on its southern shore, and being the first opening on the port side as you enter the large bay within St. Anthony Point. This bay runs in northward 3 miles, and has 25 to 35 fathoms in it, and is quite open to South and S.E. winds. St. Anthony Harbour is well supplied with wood and water, and is commonly frequented by French fishing-vessels. Cape St. Anthony lies in lat. $51^{\circ} 22'$ N., and long. $55^{\circ} 33'$ W. French Point, which lies $1\frac{1}{2}$ mile to the eastward, has occasionally been mistaken for the cape.

Braha Bay lies 3 miles north-eastward of French Point, and is small but safe, having good anchorage within it. The bottom is sandy, and the shores are bold and steep-to. It generally has a few French vessels in it during the fishing season. The Braha Shoal lies S. 74° E. (true), distant $1\frac{1}{2}$ mile from the Needle Rocks, and 12 feet are reported to be on it, but Lieut. Bullock, R.N., says that he never found less than 16 feet. Breakers are occasioned by it with a little sea; but the common current will always create a constant ripple. This is the most dangerous rock hereabout. Between it and the shore there is a good passage with 22 fathoms just within the rock, and 47 fathoms near mid-channel.

ST. LUNAIRE.—At the southern point of the entrance of St. Lunaire Bay there are two islands, between which there is but a narrow boat passage. The only channel for ships is to the northward of them, and this channel is almost half a mile wide, with both shores bold-to. Having entered between the points of the bay, you will perceive some small rocky islets ahead of you, on either side of which there is a passage, but none between, for they are connected by a rocky reef of shallow water: you will, therefore, steer to the northward of them all. On the northern shore you will see Amelia Harbour, where, within Red Island, you may anchor in 15 fathoms, or farther in, and nearer the head of the bay, in less water. The starboard side of this bay is rocky, and it is sheltered from the westward by some high islands, but toward the top of the bay is a sandy beach, where some small brooks empty themselves.

To the northward of High Island there is a sandy cove, having some little islets within it; but the depth is shallow, and there is a knoll, of 3 fathoms, lying before its entrance. To the westward is an opening, named N.W. Bay, having the land on both sides rather high, and the passage into it clear of danger; but its farther end becomes suddenly very shallow. There is also another narrow entrance to the N.W. Bay, behind a high island, which forms its southern boundary; but this is rocky, and fit only for boats. Between this high island and the two islands at the entrance of Lunaire Bay is a wide space, with very good anchorage, in 15, 18, or 20 fathoms water, where vessels may lie secure from south-easterly gales, but in going to it you must avoid a rock of only 10 feet water, which lies to the westward of Plate Island, about a quarter of a mile, and exactly the same distance from the eastern point of the high island forming the southern boundary to N.W. Bay. There is also an opening to the southward, named S.W. Bay, which appears to be clear of danger, and has a depth of 9, 8, and 7 fathoms; the shores on each side are rocky.

Lieut. Bullock says of St. Lunaire Bay:—"This excellent harbour will contain 100 vessels in perfect safety; is remarkably easy of access, and may always be recognised by the appearance of the White Cape. The best and most convenient anchorage will be found at Amelia Cove, in from 5 to 7 fathoms. The approach and entrance are

bold and steep-to, only observing to give the points of the southern islands a good berth. Both wood and water may be obtained without difficulty; and it affords, in every respect, good and secure anchorage."

GRIGUET BAY is formed by Stormy Cape to the northward, and White Cape to the southward, having several good coves or harbours for shipping engaged in the fisheries. In this bay lies Camel's Island, rising up in the middle like the hump of a camel, and scarcely to be distinguished from the main land in sailing along. Behind this island is situated the S.W. Harbour, a narrow channel, running in nearly 2 miles, with from 4 to 10 fathoms water in it; there is a shoal at its entrance.

The North-Harbour runs in within Stormy Cape; and has at its entrance a rock above water, which is bold-to all round, and vessels may sail on either side of it, and anchor in 6 fathoms water.

In the passage that leads to the N.W. and S.W. Harbours there is an island, which contracts the channel, rendering the passages narrow; the best and safest entrance is to the northward of this island, giving the outer point of the N.W. Harbour a small berth, and so soon as you get within the island you will open both harbours; that which runs in north-westward is the larger of the two, and is 2 miles deep; you should sail up on its western side, having 14, 16, and 18 fathoms, until you get inside the point, a little within which is a bank of 7 or 8 fathoms, but when you have passed over this, you will again drop into 16 and 17 fathoms; and as you approach the head of the bay, you will lessen your water to 7, 6, and 5 fathoms, everywhere good anchorage, and well sheltered from all winds. The two islands of Griguét lie outside of Camel's Island, and together form between them several small but snug harbours for fishing vessels.

Lieut. Bullock observes:—"The north bay is insecure in spring and fall, on account of its being exposed to southerly gales; the S.W. bay is therefore recommended, where there is good anchorage in 5 or 6 fathoms water. Camel Island's Harbour will always be found too intricate for a stranger, and should never be attempted without the assistance of a pilot."

WHITE ISLANDS.—The White Islands lie to the north-eastward of Stormy Cape, from which they are distant one league, and about 2 miles from the shore opposite; they are small, of moderate height, and have several rocks inside, both above and under water; but these are not considered to be dangerous, as they are easily discoverable even in fine weather, and the passage between them and the main is very safe, having a depth of 40 fathoms in it.

QUIRPON ISLAND.—This lies off the north-eastern part of Newfoundland, and forms the S.E. point of entrance to the Strait of Belle Isle: it is large, high, and barren, and Cape Degrat is visible, in clear weather, fully 12 leagues to seaward.

There is a narrow channel which runs in to the southward of Quirpon, and divides it from the main, in which lies Little Quirpon Harbour. To enter it there is no danger but what you will easily perceive. Vessels commonly moor head and stern, and lie there perfectly secure.

Degrat and Pigeon Coves lie on the eastern side of Quirpon Island, and to the northward of Cape Degrat; at their entrance are several small rocky islets, and rocks above water, affording behind them very fair security for shipping, in 4 fathoms water, and good conveniences for fishing.

Cape Bauld, the northern extremity of Quirpon Island, lies in lat. $51^{\circ} 39' N.$ and in long. $55^{\circ} 28' W.$ It is rocky and steep-to, and may be approached very near with great safety. Having rounded this cape you will perceive a rocky point to the southward leading to the harbour of Quirpon.

Great Quirpon Harbour lies on the N.W. side of the island, and its entrance is between it and Graves Island. In your approach towards it from the northward you may borrow as close as you please to Bauld Head, there being no invisible danger until you arrive at the entrance to the harbour, where there are some shoals, which must be left on your port side: to do this, keep Black Head, on Quirpon Island, open of all the other land, until Raven Point comes over Noddy Point, then haul in for the harbour, going not nearer than the distance of half a cable's length from the point of Graves Island. The anchorage within the island is everywhere good, with room and depth enough for any ships, and the ground holds well.

The best place to ride in will be towards the upper end of Graves Island, abreast of Green Island, in 7 fathoms water. The passage to the Inner Harbour, on either side

of Green Island, is very good for ships of a moderate draught of water, through which you will have 3 fathoms, and above Green Island you have excellent riding in 7 fathoms. There is also a passage to this harbour through Little Quirpon Harbour, but it is too narrow and intricate for any one to attempt, unless they are perfectly acquainted with the navigation. In and about Quirpon are conveniences for a great number of vessels employed in the fisheries, and good fishing throughout; the land everywhere is high and wears a barren appearance.

NODDY HARBOUR lies a little to the westward of Quirpon Harbour, and runs in between Noddy Point and Cape Raven. There is no danger in entering, and you will pass to the starboard of the little island that lies about a mile within the entrance, and anchor before it in 5 fathoms water; or you may, with a small vessel, run farther up into the basin, and anchor in $2\frac{1}{2}$ or 3 fathoms. There is a stage within the island, and on the eastern side of the harbour, with convenient room for many vessels.

The Gull Rock lies W.N.W. $\frac{1}{2}$ W. from Bauld Cape, in the Island of Quirpon, distant 2 miles; and N.N.E. nearly 2 miles from Cape Raven; it is always above water. Maria's Ledge lies nearly S.W. from the Gull Rock, distant $1\frac{1}{4}$ mile, and North, about a mile from Cape Raven, being distant about a mile from Maria's Head.

In standing in from the northward, for either Quirpon or Noddy Harbours, you need not fear any danger from the Gull or Maria Rocks, for both are above water; the passage between them is half a league wide, and very safe; it will, however, be prudent to pass near the Gull Rock, because of the N.W. Ledge, which never appears but in bad weather; this N.W. Ledge bears West a little south, distant $1\frac{1}{4}$ mile from the Gull Rock, and you should not attempt the passage between it and the main, on account of other rocks that are said to lie about, and places of shallow water.

SACRED ISLANDS.—Great Sacred Island lies about N.W. by W. $\frac{1}{4}$ W. from Bauld Cape, distant $5\frac{1}{2}$ miles, and S.E. by E. $\frac{1}{2}$ E. from Cape Norman, nearly 12 miles. Little Sacred Island is one mile to the south-eastward of the Great Island; the passage between them is safe, and you may sail round both, for they are high and bold; within them, on the main, and to the W.S.-Westward, is Sacred Bay, tolerably large, with numerous rocky islets within it: the shores of this place abound with wood, and, therefore, it is much resorted to for the use of fisheries at Quirpon and Griguet, &c.

Cape Onion forms the north point of Sacred Bay, being high and steep; near it is a remarkable rock, named the Mewstone, and much resembling that in Plymouth Sound. There is a little cove to the southward of this rock, where a vessel may occasionally resort to with safety. From Cape Onion to Burnt Cape the course is W. $\frac{3}{4}$ N. about $4\frac{1}{2}$ miles. Burnt Cape has a white appearance, and rises from the seaward to a considerable height.

HA-HA BAY.—On the eastern side of Burnt Cape is Ha-Ha Bay, which runs in southerly about 2 miles. It lies open to northerly winds, but when you are within the cape you will find anchorage in 6 or 7 fathoms, or you can go farther up and ride well sheltered in 3 or $2\frac{1}{2}$ fathoms. This is a convenient place for the fisheries and has plenty of wood.

PISTOLET BAY.—This bay lies between Burnt Cape and the Norman Ledges, which bear from each other N.W. by N. and S.E. by S. distant 4 miles. It is extensive, and reaches several miles each way, having good anchoring ground in most parts, particularly on the western side, a little above the islands, in about 5 fathoms water; the shore is tolerably well furnished with wood, and contributes to supply those places which are destitute of that article.

Cook's Harbour, in the N.W. part of Pistolet Bay, and within the islands, is about 2 miles above Norman Ledge Point. These ledges are about 1 mile to the eastward of the north point. To clear these dangers as you enter, be sure to keep Burnt Cape well open of the outer rocks, that lie off the islands at the western entrance to Pistolet Harbour, and if going in, so soon as you consider yourself to be to the southward of these ledges, steer in for the harbour, leaving the islands and rocks on your port side; keep the southern shore on board, for fear of a ledge of rocks that juts out from a little rocky island on the other side; and so soon as you get within the island, haul over for the northern shore, and anchor in 4 or 5 fathoms water. This harbour might be made very convenient, with several fishing rooms; and proper stages, to which the boats might resort and cure their fish, might be erected in all the coves between it and Cape Norman.

BELLE ISLE lies at the entrance of the strait of the same name, and should be

named the Northern Belle Isle, to distinguish it from those we have already described, lying to the southward. It is about $9\frac{1}{2}$ miles long and $4\frac{1}{2}$ broad, being distant from Baul' Head in Quirpon Island about 14 miles, and from the coast of Labrador 12 miles; it is moderately high, and wears an uniform sterile appearance. On its north-western coast there is a small harbour named Lark Cove or Harbour, lying within an island almost close to the land, and fit only for small craft; and at the eastern side of the island is another cove named Batteaux Creek, frequented occasionally by shallops. About two miles to the north-eastward of this island lies a ledge of rocks, part of which appears above water, and over these the sea breaks very high; this is named the N.E. Ledge, and you will have 15 and 20 fathoms close to it, and 55 between it and the north part of the island. The soundings about Belle Isle are very irregular; near the island you will seldom find less than 20 fathoms, except on a small bank, said to lie to the northward, distant 4 miles from its northern part, whereon are only 5 fathoms. On its extreme south-west point there is a lighthouse, consisting of a circular tower built of stone, and faced externally with fire-bricks, of a light colour; it stands in lat. $51^{\circ} 53'$ N. and long. $55^{\circ} 22' 15''$ W., is 62 feet high, and exhibits a fixed white light at an elevation of 470 feet above the level of the sea at high water, visible at a distance of about 28 miles, all round the horizon. This light is not shown from December 31st to March 15th. Signals are given by means of an air or fog whistle, sounded at short intervals during foggy weather and snow storms; or, by a nine-pounder gun fired every hour when the whistle is out of order.

CAPE NORMAN is the northernmost point of Newfoundland, and is of a moderate even height, and very barren appearance, which continues far inland. It is about a league to the north-westward of the ledges from Cape Norman that the shores of Newfoundland turn south-westerly, and will be hereafter described.

SOUTH COAST OF NEWFOUNDLAND.

FROM CAPE RACE TO CAPE CHAPEAU ROUGE.

CAPE RACE, the south-east extremity of Newfoundland, is, as before mentioned on page 10, a tableland of moderate height. A black rock lies near to it, and several smaller ones around it. E.S.E. from the cape, and to the southward of Cape Ballard, lies a fishing-bank, named New Bank, about 5 miles long and nearly 2 miles broad; on it are from 17 to 25 fathoms water, with very deep water on its outside, and 30 fathoms just within it. Vessels making this part of the coast may know their approach toward the land, by suddenly lessening their water to the above depths.

From Cape Race the land trends $5\frac{1}{2}$ miles westerly to French Mistaken Point, off which is a rock above water. From French Mistaken Point, the coast runs N.W. by W. a distance of 2 miles to English Mistaken Point, off which is also a rock. Thereafter the coast trends N. by W. into Biscay and Mutton Bays, which are seldom frequented; it is considered dangerous to get embayed there, as the sea generally drives in, and there are hardly any currents to help you out again. Mutton Bay lies between Cape Mutton and Cape Powles, and is about 2 miles deep, with 12 to 3 fathoms, rocky bottom. The N.W. part of Mutton Bay is separated from Trepassy Harbour by a low, narrow, stony beach, over which the vessels in Trepassy Harbour can be seen. At the extremity of this neck of land is Cape Powles, which forms the east point of the entrance into Trepassy Harbour.

TREPASSEY HARBOUR.—The entrance to this harbour is about three-quarters of a mile wide, and runs nearly of the same breadth for $2\frac{1}{2}$ miles, when it narrows to one-quarter of a mile, but again increases to three-quarters of a mile where the ships ride. Ships intending to enter this harbour generally steer from Mistaken Point towards Cape Pine, until they fairly open the harbour; they may then safely run along shore, as it is bold. The dangers in sailing into the harbour are, a small rock on the eastern shore, about a mile within Powles Head, and about one-third of a cable's length from the shore; and on the west side, a shoal which runs along shore up

the harbour to a low green point. Baker's Point on with a low rocky point at the entrance of the harbour, will carry you clear of this shoal. When you are nearly up with the low green point you may steer more to the westward, and anchor either in the N.W. or N.E. arm in 5 or 6 fathoms. Wood and water can be obtained here with facility.

From Cape Powles to *Cape Pine*, the bearing and distance are S.W. by W. 5 miles. *Cape Pine* is moderately high and barren. A tower, 56 feet high, and painted with bands of red and white alternately, has been erected on *Cape Pine*, from which a brilliant revolving light is exhibited, appearing in its greatest brilliancy every half minute. The light is elevated 314 feet above the level of the sea, and is visible at seaward in clear weather at a distance of about 30 miles. Lat. $46^{\circ} 37' 4''$ N. and long. $53^{\circ} 32' 27''$ W.

From *Cape Pine* to *Cape Freels* the bearing and distance are West, $1\frac{1}{2}$ mile; and from *Cape Freels* to *Black Head*, W.N.W., a mile; the coast, thereafter, trends N.W. $\frac{3}{4}$ W., one mile, to the eastern reef and head of *St. Shot's Bay*, which bay is about a mile deep, but entirely open to the sea, and very dangerous. From the eastern to the western head, the bearing and distance are N. by W. 3 miles.

ST. MARY'S BAY.—The eastern head of *St. Shot's* may be considered the east point of *St. Mary's Bay*, while *Point Lance* forms the west point; these bear from each other N.W. by N. and S.E. by S., distant about 20 miles. The bay runs up $9\frac{1}{2}$ leagues, the land on each side being moderately high. From the western head of *St. Shot's* to *Gull Island*, the bearing and distance are N. $\frac{1}{4}$ E. 4 miles. *Gull Island* is small, and lies close to the land. From *Gull Island* to *Cape English* the course and distance are N. by E. $\frac{1}{2}$ E. $4\frac{1}{2}$ miles. *Cape English* is high tableland, terminating in a low rocky point, forming a bay, about a mile deep, to the southward of it: at the bottom of this bay is a low stony beach, within which is *Holyrood Pond*, running to the E.N.E. about 6 leagues; this being within the cape gives it the appearance of an island when you are to the southward of it. From *Cape English* to *False Cape* the bearing and distance are N.E. $\frac{1}{2}$ E. $1\frac{1}{2}$ mile; and from *Cape English* to *Point la Haye* the bearing and distance are N.E. $\frac{1}{4}$ E. $6\frac{1}{2}$ miles. *Point la Haye* is low, and has a ledge of rocks extending from it $\frac{1}{2}$ a mile to the W.S.W., and a mile along the shore, on which the sea breaks in bad weather. This is the only danger in the bay, and must be avoided.

From *Point la Haye* to *Double Road Point* the bearing and distance are E.N.E. $1\frac{1}{2}$ mile. The land between is low and bears a barren appearance. *Double Road Point* is the southern extreme of *St. Mary's Harbour*.

ST. MARY'S HARBOUR.—The entrance to this harbour is above a mile wide, formed by *Double Road Point* on the south side, and *Ellis Point* on the north: within these points the channel divides into two branches, one to the S.E., into *St. Mary's Harbour*, the other to the E.N.E., into what is named *Mal Bay*. When you are within *Ellis Point* haul in to the southward, and anchor abreast of the stages and houses, upon a flat, in 4 or 5 fathoms, where you will lie land-locked. This flat runs off about half a mile from the shore, and without it are from 15 to 40 fathoms over to the other side; but the best anchorage is about 2 miles above the town, where it is above half a mile wide, opposite *Brown's Pond*, which may be seen over the low beach on the starboard hand: here you will lie land-locked in 12 fathoms water, and excellent ground all the way up to the head of the bay.

Mal Bay, or the E.N.E. branch, is about a mile wide, and about 2 miles deep, but there is no good anchorage, a heavy swell generally setting into it. The coast from *Trapeau Point* trends N.N.E. $\frac{1}{4}$ N., above 2 miles, to *Shoal Bay*, opposite to the northern point of which lies *Great Collinet Island*, which is about a league in length and $1\frac{1}{2}$ mile broad; on either side of it there is a safe channel, taking care to give *Shoal Bay Point*, which lies a mile distant from the east end of *Great Collinet*, a berth of a quarter of a mile, to avoid some rocks with lie off that point. On the northern side of the island is a stony beach, off which lies a bank for about a quarter of a mile, on which are from 7 to 18 fathoms, rocky bottom. *Little Collinet Island* is distant 2 miles north-eastward from *Great Collinet*, and is above one mile long and half a mile broad: it is surrounded by deep water.

Great Salmon River.—The entrance of this river, lying 4 miles E. by N. from the northern part of *Little Collinet Island*, is about three-quarters of a mile wide, and runs E.N.E. about 7 miles. *Little Harbour* is an opening about 3 miles up

this river, on its southern shore, opposite to which, in a small cove, is the best anchorage in the river, although it is generally good throughout: here you may ride in safety in 5 or 6 fathoms water. As you advance up the river it becomes narrow, and towards its farther end becomes very shallow.

Collinet Bay.—The mouth of Collinet Bay lies N.E. $\frac{1}{2}$ E. $5\frac{1}{2}$ miles from the north point of Little Collinet Island. This bay runs in N.E. by N. about 2 miles, where the point of an island on the starboard side narrows the passage; it then widens again towards the top, where there is a sandy shallow beach. The anchorage is good throughout the whole of this bay. Below the narrows you will have from 12 to 6 fathoms water; there are 7 and 8 fathoms in passing the narrows, and above it 6, 5, and 4 fathoms, all good ground. There is a cove between Salmon River and Collinet Bay, which is $1\frac{1}{2}$ mile deep, and has from 13 to 4 fathoms in it; but as it is exposed to the S.W., it is not much resorted to.

The entrance to North Harbour lies W.S.W. 4 miles from Collinet Bay, and is about three-quarters of a mile wide, and runs up to the northward 3 miles. In it is very good anchorage, in about 5 or 6 fathoms water, about 2 miles within the entrance, where it is not above half a mile wide; or you may run farther up, where two sandy points stretch out, being half a cable's length asunder; keep the starboard point on board, and anchor close within the starboard side. In entering North Harbour, always keep mid-channel, for the eastern side is somewhat shallow.

Between North Harbour and Point Lance the coast trends W.S.W. $\frac{1}{2}$ S., between which are one or two coves, but no place fit for shipping. Point Lance is situated in lat. $46^{\circ} 48'$, and is a low rugged point, though the interior country is considerably elevated. From Point Lance to Cape St. Mary the bearing and distance are N.W. $\frac{1}{2}$ W., about $6\frac{1}{2}$ miles.

CAPE ST. MARY, &c.—This cape is the east point of entrance into Placentia Bay. It is a pretty high bluff point, appearing somewhat like Cape San Vicente on the coast of Portugal. It may now be further distinguished by its lighthouse, 40 feet high, and built of brick, with the dwellings of the keepers on each side of it, the sides of which are painted white and the roofs red; its position is in lat. $46^{\circ} 49' 25''$ N., and long. $54^{\circ} 8' 45''$ W., and from its summit, at an elevation of 325 feet above the sea, a revolving light is shown, producing alternately every minute a brilliant red and white light, visible in clear weather at a distance of about 24 miles. At the distance of fully two miles, W. by S. from Cape Lance, lie the Bull and Cow Rocks, which are two flat rocks, lying very near each other, and having many small rocks about them. There is another rock, appearing at half-tide, about a similar distance westward of the cape, nearer the main, between which and the shore are 10 fathoms, and between it and the Bull and Cow Rocks 15 fathoms, but a sunken rock is said to lie off the southern side of the former. In a similar direction to the Bull and Cow Rocks from Cape Lance, but at $9\frac{1}{2}$ miles distant, and nearly S.W. $\frac{1}{2}$ S., distant $7\frac{1}{2}$ miles from Cape St. Mary, are two other little rocks, named St. Mary Cays, appearing just above the surface of the water, and having the sea constantly breaking over them; they lie S.E. and N.W. from each other, distant 3 cables' lengths, and have 15 fathoms between them and the same depth of water all round them, excepting towards the S.S.E., where, at 2 cables' lengths off, only 6 fathoms will be found. There are 30, 25, and 19 fathoms between these rocks and Cape St. Mary, and near the cape are 13, 14, and 15 fathoms.* Vessels therefore may proceed between them, and also between the Bull and Cow Rocks and the main, if necessary; but perhaps it will always be more prudent to go to the southward of both.

A rock, with 18 feet over it, named Pylades or Brien Rock, is reported to lie 3 miles N.N.W. from the north point of Cape St. Mary, at $1\frac{1}{2}$ mile off-shore, and another of 9 feet at $6\frac{1}{2}$ miles in a similar direction from the cape, and at about 2 miles from the shore; these positions, however, require verification.

PLACENTIA BAY.—The entrance into Placentia Bay is formed by Cape Chapeau Rouge on the west side, and Cape St. Mary on the east side, which bear E.S.E. and W.N.W. from each other, distant about $16\frac{1}{2}$ leagues.

Cape Chapeau Rouge, in lat. $46^{\circ} 54'$, is the highest and most remarkable land on

* A small shoal of 12 feet is reported to lie $2\frac{1}{2}$ miles N.N.E.-ward of St. Mary Cays, but we have no particulars of its extent or character.

this part of the coast: it appears above the rest somewhat like the crown of a hat,—hence its name; and in clear weather may be seen 11 or 12 leagues to seaward.

The direction from Cape St. Mary to Point Breme is N. by E. $\frac{1}{2}$ E. about 8 miles, and from Point Breme to the Virgin Rocks, it is N.E. $\frac{1}{4}$ E., distance 10 miles. These rocks appear above water, and lie about $1\frac{1}{2}$ mile from the main. A little to the southward of them there are some whitish cliffs in the land, by which that part of the coast may be distinguished, on falling in with it, in thick weather. The Girdle Rock lies S.S.W. from the Virgin Rocks, distant about one mile. Other detached rocks are reported hereabout.

From the Virgin Rocks to Point Verte, the course is N.E. by E. $\frac{1}{4}$ E., distance 6 miles. Point Verte is the south Point of the entrance into the Road of Placentia, the first place of shelter for shipping on the starboard shore of Placentia Bay.

PLACENTIA HARBOUR.—Point Verte is a low level green point, with a pebble beach on the east side, nearly half a mile long, with several fishing stages just within it. At the end of this beach is a high rocky cliff, that extends to the S.E. corner of the bay, where it again terminates in a pebble beach. This beach runs E.N.E. one mile to the Fort Point: on the inside of it stands the town of Placentia, facing the S.E. arm of the harbour. A little to the southward of the town is a high hill, with a remarkable cliff in the middle of the beach. The outer point on the north side is level, with a clay cliff on the outer part. It bears from Point Verte N.E. by N. nearly, distant $1\frac{1}{2}$ mile: from this point the land forms a small bay, with a stony beach round it, to the corner of the cliff under Signal Hill, this being the first hill on the north side of the road from this point. The cliff continues to Freshwater Bay, which is formed in a small valley between Signal Hill on the west, and Castle Hill on the east, with a pebble beach round it. A small rivulet runs down this valley, where ships can procure water.

To sail into the road coming from the southward, keep one league from the shore, in order to avoid the Gibraltar Rock, which lies W. $\frac{1}{2}$ N. from Point Verte, about 2 miles, with 8 feet water on it. Near the bottom of Placentia Road, on the north shore, at the top of a hill, stand the ruins of a castle, distinguishable far out at sea. So soon as the castle comes open to the northward of Point Verte, you may haul in for the castle, taking care to give Point Verte a berth of nearly 2 cables' lengths; and by keeping your lead going, you may borrow on the flat, which lies on the south shore, into the depth of 4 fathoms: the soundings throughout are gradual. The best anchorage in the road is under the Castle Hill, in about 6 fathoms water. There is a long beach at the bottom of the road, which terminates in a point to the northward, on which stand some houses and an old fortress; there is also a fort on the opposite point. The entrance into the harbour is between these, and is very narrow, being not more than 60 fathoms across, and the tide into it runs more than four knots an hour. In the entrance you have $3\frac{1}{2}$ fathoms water: after you are within the narrows, it is about one-third of a mile broad, and about $1\frac{1}{2}$ mile long: here you may anchor in perfect safety, in 6 or 7 fathoms water. The tide rises 6 or 7 feet; and it is high water, F. & C., at 9h. 15m. a.m.

The only known dangers near Placentia are the Girdler, Virgin, and Gibraltar Rocks, on the south, and Moll Rock on the north.

The Moll Rock bears from Point Verte N.E. $\frac{1}{2}$ E., distant 2 miles, and N.N.W. from Moll Point three-quarters of a mile. There are only 12 feet of water on this rock, with 10 fathoms around it.

From Point Verte to Point Latina the bearing and distance are N.E. by N. $5\frac{1}{4}$ miles. At the distance of a mile S.W. from Point Latina is the Wolf Rock, which lies about half a mile from the main, and between Placentia Harbour and Point Latina, and therefore must have a good berth in passing. The shore all the way is low near the sea, but high and ragged inland. Point Roche is about a mile to the eastward of Point Latina, and has a shoal off it, extending a quarter of a mile out.

LITTLE PLACENTIA HARBOUR.—This harbour runs in to the southward from Point Roche; and S.E. by E. $\frac{1}{2}$ E. from Point Roche, distant 2 miles, is the opposite, or Fox's Point, which may be considered to be the eastern entrance to Placentia Sound. The harbour of Little Placentia lies on the western side of this sound, and extends W. by S., about $1\frac{1}{2}$ mile, and is nearly half a mile broad.

There is excellent anchorage in this harbour, in a cove on the north shore: this cove may be known by the west point being woody, and the land to the east-

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ward being barren. Off the east point of the cove lies a shoal for nearly one-third of the distance over to the south side of the harbour; in this cove are 7 and 8 fathoms water.

Placentia Sound is an arm which runs in nearly a league to the eastward; it has deep water, but is little frequented. Fox's Harbour is a small sandy cove, fit only for boats.

From Point Latina to Ship Harbour, the course is East, distance $5\frac{1}{2}$ miles; this harbour runs up northerly $2\frac{3}{4}$ miles, and is about half a mile broad. The best anchorage is in a cove on the west side, in about 10 fathoms water, at about a mile from the entrance.

Fox Island is small and round, and lies N.E. $\frac{1}{2}$ N. one league from Point Latina, and N.W. by W. the same distance from Ship Harbour Point, a low stony point, about $1\frac{1}{2}$ mile to the westward of Ship Harbour. Between Fox Island and Ship Harbour Point is a range of rocks, which in bad weather break almost across; between the rocks are $2\frac{1}{2}$, 5, 7, and 10 fathoms water. N.N.W., $1\frac{1}{2}$ mile from Fox Island, is a steep rock above water, named *Fishing Rock*; and N.N.E., $1\frac{1}{2}$ mile from Fishing Rock, lies a sunken rock, named *Rowland Rock*, which almost always breaks.

There is a rock northward of the Rowland Rock, between Red Island and the Ram Isles; the fishermen say that many pilots who take vessels up Placentia Bay know nothing of it; there are not more than 6 feet of water on this danger, which goes by the name of *E.S.E. Rock*, probably from its position from the north-east corner of Red Island.

THE RAM ISLANDS.—These are a cluster of high islands, lying about 3 miles to the N.E. $\frac{3}{4}$ E. of Fox Island. Long Harbour lies on the eastern side of these islands, and there is not the least danger in sailing into it. The best anchorage is on the northern side, to the eastward of Harbour Island, between it and the main, where you will lie secure from all winds in 6 or 7 fathoms water.

The shore from Long Harbour runs N.N.E., N. by E., and North, a distance of fully 15 miles, in which space there is not the least shelter for vessels, nor scarcely for boats, until you reach Little Harbour, Little South Harbour, and Great South Harbour. There are said to be several low islands and rocks within this space: one of which, named the *White Rock*, from being covered with the dung of birds, lies N.E. by N. from Point Latina, distant 13 miles, and directly midway between Fox Island and Little Harbour. It is situated abreast of a small place named Tinny Cove, and fully 2 miles off the land: vessels pass on either side.

Little Harbour is small, with 7 fathoms water; the ground is bad, and lies entirely exposed to the S.W. wind, which heaves in a very great sea.

LITTLE SOUTH HARBOUR lies one mile to the north-westward of Little Harbour, and has before its entrance several rocky islands. In sailing into the harbour you must leave these islands on your starboard hand, except one, on either side of which is a safe passage of 15 fathoms water. On the southern shore, within the islands is a sunken rock, about one cable's length from the shore, which generally breaks; nearly opposite are also some rocks, about a cable's length from the shore, that show at half-ebb. This harbour is about $1\frac{1}{2}$ mile long, and half a mile wide, with 7 fathoms water, good bottom.

GREAT SOUTH HARBOUR lies about a mile to the northward of Little South Harbour. There is no danger in sailing into it; and near the head is very good anchorage in 6 and 7 fathoms water. To the westward of Great South Harbour is Isle au Bordeaux, a high round island near the main.

COME-BY-CHANCE HARBOUR.—The entrance into Come-by-Chance Harbour lies N.N.E. 4 miles from Isle au Bordeaux, and runs up N.E. by E. 3 miles. In it are from 20 to 3 fathoms water, sandy bottom; but it is entirely exposed to the S.W. wind, which heaves in a very great swell.

NORTH HARBOUR.—The entrance of this harbour lies about 3 miles N.N.W. from the entrance of Come-by-Chance. About two miles from the entrance there is good anchorage in 7 fathoms water, and no danger in sailing in.

PIPER'S HOLE.—The entrance to Piper's Hole lies N.W. by N. $2\frac{1}{2}$ miles from the entrance to North Harbour. The channel lies between Sound Island and the main, and in it you will have 19, 15, and 12 fathoms, and when to the northward of the island, 8, 7, and 6 fathoms. Hence Piper's Hole runs up to the northward

fully 5 miles; but the water is shallow and unfit for shipping. Sound, Woody, and Barren Islands lie in a south-westerly direction from Piper's Hole, and between them and the north-western shore there is a channel half a mile wide, in which are from 7 to 20 fathoms, and good anchorage all the way. There is a passage with from 7 to 16 fathoms between Woody and Sound Island, but there is a much wider and deeper passage between Woody and Barren Island, in which there are 40 and 50 fathoms. There is a small cove, named La Plant, opposite the northern part of Barren Island, but it is fit only for boats. Barren Island is about $3\frac{1}{4}$ miles in length, and one in breadth: it is high land, and there is a small cove at its south-eastern part, in which tolerable anchorage may be got in from 8 to 16 fathoms. Gulsh is an unimportant inlet, lying N.W. by W. from the southern part of Barren Island; and farther S.W. are Great and Little Sandy Harbours.

GREAT SANDY HARBOUR.—At the distance of 4 miles W. $\frac{1}{2}$ S. from the south end of Barren Island lies Great Sandy Harbour, to which there is a passage between Ship Island and the main, with 7, 9, and 17 fathoms water. The entrance into the harbour is very narrow, and is much encumbered with rocks, which are all above water, and have channels between them; but when you get within the harbour there are 6 and 7 fathoms and good shelter.

LITTLE SANDY HARBOUR is one-quarter of a mile to the southward of the Great Harbour. In it you have 6 and 7 fathoms water, good bottom; but in sailing in, you should pass to the northward of a low rock, which lies at the entrance.

This harbour may be known by the island named Bell Island, which lies S.E. $\frac{1}{2}$ E. $1\frac{1}{2}$ mile from the mouth of it, and N.E. by N. 13 miles from the west point of Merasheen Island. Off the south point of the island is a remarkable rock; and the island itself is said to resemble a bell with the bottom upwards—hence the name.

To the S.W. by S. from Bell Island lie the Burgoe Islands, and farther to the southward the White Islands.

CLATISE HARBOUR.—This harbour is situated on the main within the Great Isle of Valen, and its entrance lies S.W. by W. about 5 miles from the Burgoe Islands. The shore all along from the Sandy Harbours is steep-to, and the passage to the harbour is about three-quarters of a mile wide, with 40 and 50 fathoms water; but the cove itself is very narrow. The best anchorage is in the western branch, which is a mile long, but not a quarter of a mile broad; in it are from 10 to 17 fathoms water, good bottom. Between Great and Little Valen Islands and the main there is also a good channel from the southward, with 20, 30, and 50 fathoms in it.

Grammer's Rocks are a cluster of low rocks, above water, lying E. by N. $\frac{1}{2}$ N. $1\frac{1}{2}$ mile from the northern end of Great Valen Island. Between Great and Little Valen Islands there is a passage, which is, however, encumbered with several rocks.

MERASHEEN ISLAND.—This island is high and very narrow and runs to the N.E. by E. rather more than 6 leagues. At the south-western part is a small but very good harbour, in which are from 6 to 10 fathoms water. To sail into it, keep the starboard shore on board, in order to avoid a sunken rock lying one cable's length off a ragged rocky point on the port hand going in. A small cluster of rocks lies off the south-eastern part of Merasheen, three-quarters of a mile from shore: these lie between it and Red Island.* A large cluster of rocks and islands, named the Ragged Islands, lie off its northern shores.

RED ISLAND.—Red Island is high and barren, about $4\frac{1}{2}$ miles long, and $2\frac{1}{2}$ miles broad. Its south point lies N.N.W. 11 miles from Placentia Road, and E. by N. 16 leagues from Mortier Head. On the east side, near the northern end, is a small harbour, which is only fit for shallows. At the distance of 7 miles, directly N.E. from Red Island, lies the main body of Long Island; and midway between them is Woody Island, off the S.W. end of which are two small rocks above water. With the exception of these two rocks, the passage between Red and Woody Islands is clear from dangers, and nearly 3 miles wide. The channel between Woody and Long Island is 2 miles wide, and is represented to contain deep water.

LONG ISLAND.—From Point Latina to the south point of Long Island, the course is N. $\frac{1}{2}$ E. $13\frac{1}{2}$ miles. Its length is nearly 3 leagues, but its breadth is

* It has also been reported (1850) that shoals (? shallow water) extend S.S.W.-ward, 12 miles from Merasheen Island.

nowhere much above one mile. The southern point of the island is formed of remarkably high steep rocks; and off it lie Iron Island and a small rock above water.

On the eastern side of Merasheen Island, at 4 miles N.W. by W. from the southern point of the island, is Indian Harbour, formed by a small island, on either side of which is a safe passage. The only anchorage is to the westward of the island, between it and Merasheen, and here the ground is uncertain.

Harbour Buffet lies on the east side of Long Island, about $2\frac{1}{2}$ miles from the south point, and is tolerably good: the entrance to it is narrow, but has 13 fathoms water in it. There are two arms in this harbour, one running to the westward, the other to the northward: the best anchorage is in the north arm, in about 15 fathoms water. This harbour may be known by the islands that lie in the entrance, and to the southward of it, and by Harbour Buffet Island, which lies E. $\frac{1}{2}$ S. one mile from the entrance. To sail into it you must pass to the northward of the islands at its mouth.

About 4 miles from the south point of Long Island, on the western side, lies *Muscle Harbour*. The entrance into the harbour lies between a low green point on your starboard hand, and a small island on your port hand. The harbour is $1\frac{1}{2}$ mile long, and one broad, and in it are 10 to 22 fathoms water, rocky bottom. Vessels steering for this place may run in between Woody and Iron Islands from the southward, or between Long and Merasheen Islands from the northward; but in the latter track there are some rocks to be guarded against, which lie nearly mid-channel between the northern ends of both islands. There are also some rocks above water to the north-eastward of Long Island, called the Bread and Butter Islands, but these are always visible, and steep-to.

At the distance of 4 miles, W.N.W. $\frac{3}{4}$ N., from the south-western point of Merasheen Island, lies the little harbour of *Presque*, in which the water is sufficiently deep, but there are so many rocks about its entrance, that access to it is rendered very difficult. The Black Rock lies 2 miles S.W. $\frac{1}{2}$ W. from *Presque*, and a quarter of a mile within this rock there is a sunken rock. The Island of Marticot lies 2 miles West from the Black Rock, and is about a mile in length, and half a mile broad. The harbours of *La Perche* and Little and Great *Paradise* lie within the Black Rock and Marticot Island.

LA PERCHE runs in to the northward of the Black Rock. There is no safe anchorage in it, the ground being bad, and the harbour itself lying entirely exposed to the south-east winds. To the northward of the east point of Marticot Island and to the westward of *La Perche* lies Little *Paradise*, in which the only safe anchorage is in a cove, at the head of the harbour, on the port side, where you may moor to the shore, and lie land-locked. The harbour of Great *Paradise* is only fit for boats, and lies to the westward of Little *Paradise*. Between Marticot and the main is Fox Island: there is a safe passage for vessels between these islands, with not less than 9 fathoms water, but there is no passage between Fox Island and the main.

PARADISE SOUND.—About a mile to the westward of Fox Island is the entrance to Paradise Sound, which runs up N.E. by E. $4\frac{1}{2}$ leagues, and is about a mile broad. There is very deep water in it, but until you get near its head, there is no safe anchorage. Just within the entrance on the east side is a cove, in which there are 10 fathoms, and several rocks above water, but it is not safe to anchor, the bottom being rocky. There is a sunken rock, which must be avoided, in passing to the north-westward of Fox Island. Long Island lies to the south-westward of Paradise Sound, and runs W.S.W. $\frac{1}{2}$ S. about $3\frac{1}{2}$ miles; it is, for the most part, high land, making in several peaks.

Petit Fort Harbour lies at the distance of a mile to the westward of Paradise Sound. It is a very good harbour, having in it from 14 to 7 fathoms water, good bottom. The entrance is rather more than a quarter of a mile wide, and lies N.E. 5 miles from the south point of Long Island, and N. by E. $2\frac{1}{2}$ miles from the north point of Long Island. There is not the least danger in sailing into this harbour: the best anchorage is on the starboard side. The S.E. winds heave in a great swell on the west shore when they blow hard.

About $1\frac{1}{2}$ mile to the westward of Petit Fort Harbour lies Nonsuch Harbour, about the mouth of which there are several islands, but no safe anchorage till you get within all of them.

Cape Roger Harbour lies at the distance of $1\frac{1}{2}$ mile to the westward of Nonsuch Harbour, and close to the westward of Cape Roger, a high, round, barren head, lying N. $\frac{1}{4}$ E. $3\frac{1}{2}$ miles from the south point of Long Island. There are several low rocks and islands lying off the east point of the entrance. In the harbour, at a quarter of a mile within the entrance on the west side, there is a small island having to the northward, between it and the main, very good anchorage in 7 or 8 fathoms water; or you may run farther up, and anchor in 6 or 7 fathoms.

Two miles N.N.W. from the south point of Long Island lies a small islet named Green Island, with a shoal all round it, to nearly a cable's length.

GREAT GALLOWES HARBOUR.—From Green Island N.N.W. $2\frac{1}{2}$ miles lies Great Gallows Harbour Island, which is high land. Vessels may pass on either side of this island into Great Gallows Harbour, which lies one mile to the E.N.E. of the island. In this harbour is exceedingly good anchorage in 7 fathoms water, on the starboard side, just within a low stony point, taking care to give the point a small berth, in order to avoid a rock covered at high water.

Little Gallows Harbour lies close round to the eastward of Great Gallows Harbour, and is only fit for small vessels, which must lie moored to the shore, above a rock which is above water, on the port hand. A narrow neck of land only divides the two harbours. Little Gallows Harbour Island lies before the mouth of the harbour.

Little Harbour is the first harbour to the westward of Great Gallows Harbour, but it is only fit for boats.

BAY DE L'EAU lies to the westward of Little Harbour, and runs in N.E. $\frac{1}{2}$ E. rather more than a league. There is deep water in it all the way up, except at its head where there appears a sandy beach; here vessels may ride in 3 fathoms.

Boat Harbour lies round the western point of Bay de l'Eau, off which is a rock above water. It runs up N.E. one league, and has deep water to within half a mile of the head. The coast from Boat Harbour runs south-westward to Bane Harbour, which lies on the main and is fronted by several islands, the largest of which, named Cross Island, is high and woody, and about $2\frac{1}{2}$ miles in length, by one in breadth. Between Cross Island and the main are several other islands.

BANE HARBOUR is an exceedingly good harbour for small vessels: the passage into it is very narrow, and has in it 2 fathoms water, but when in there is sufficient room to moor in 3 fathoms, good bottom. Between all these islands there are good channels, by which vessels may pass to the harbours to the northward. Rashoon lies $1\frac{1}{2}$ mile S.W. from Bane Harbour, but is too shallow for any vessel; and about the same distance from Rashoon is Broad Cove, lying to the north-eastward of a point of land which juts out, named Broad Cove Head. In Broad Cove there is very good anchorage, in 8 or 9 fathoms water.

RED HARBOUR is a good harbour lying at the distance of 3 miles from Broad Cove Head. In it are 17, 13, and 9 fathoms, but it is too open to the southward. At the distance of $3\frac{1}{2}$ miles S.W. from Red Harbour, and situated on the main, is John-the-Bay; in your passage to which, and nearly mid-channel, between Flat Islands and the shore, is a cluster of small islands, with deep water all round them; and farther on, near the land, is a rock above water, on either side of which you may sail. The channel between it and the land is narrow, and has 17 fathoms; that on the eastern or outer side has 18, 25, and 26 fathoms, and leads directly out to Placentia Bay.

AUDIERNE ISLAND lies half a mile to the northward of St. Jude or Middle Island, and has on its west side a tolerably good harbour. Vessels bound for this harbour may pass between St. Jude and Audierne Island, and between Crow and Patrick's Island, two small islands lying off the S.W. point of Audierne Island. About one cable's length from Audierne Island, to the southward of the harbour, is a sunken rock; the mark for clearing it, when coming from the southward, is not to haul in for the harbour till you open a remarkable green point on the south side of the harbour. The best anchorage is on the north shore, just within a small island. A spit of rocks, covered at high water, stretches off the Green Point on the south shore. Mr. Bursell says, "Entering the harbour of Audierne there are two rocks to be passed on the port hand—one is called the Bread Box: a stranger going into the harbour should keep in mid-channel, and steer for the church on an E.S.E. bearing; it is a good mark and may be seen a long distance off."

Off the north-eastern point of Audierne Island is a small island, named Ford's Island, having a sunken rock on its western side at about a cable's length distant, and another on the east side; both of which almost always break.

At $1\frac{1}{2}$ mile W. by N. from Ford's Island lies Green Island, off which is a little rocky islet, and another off its western ends. There is deep water all round it, 11 fathoms close to the rocky islets, 70 fathoms between it and Ford's Island, 73 and 60 fathoms between it and Long Island, and still deeper water towards the Gallows Harbours.

The Saddle-back is a small island lying E.N.E. $\frac{1}{2}$ E. $8\frac{1}{2}$ leagues from Corbin Head; E. by N. 16 miles from Mortier West Point; and E. by S. 3 leagues from John-the-Bay Point. This is the outermost of a great number of rocks and small islands lying between it and the main, thereby rendering this part of the coast very dangerous. There is a chain of rocks stretching $1\frac{1}{2}$ mile to the N.E. by E. from the Saddle-back.

ST. JUDE, or MIDDLE ISLAND, is an island about $2\frac{1}{2}$ miles in length, and 2 in its greatest breadth. It lies $1\frac{1}{2}$ mile to the north of the Saddle-back, and has on its south end a remarkable round hill, named the Cape. Between this island and the main is a cluster of islands and low rocks, with a great number of sunken rocks about them, named the Flat Islands, the innermost of which lies about a mile from the main.

At $3\frac{1}{4}$ miles West from the south-eastern Flat Island, and 2 miles to the N.N.W. of John-the-Bay Point, lies John-the-Bay, in which is tolerably good anchorage in about 8 fathoms water, with sandy bottom.

From John-the-Bay Point to Mortier East Point the course is S.W. $\frac{1}{4}$ W., distant 8 miles. At 2 miles S.W. by W. from John-the-Bay Point is Rock Harbour, which is fit only for boats, on account of the multitude of rocks within it, both above and under water. Between John-the-Bay Point and Rock Harbour lie two sunken rocks, half a mile from the shore.

MORTIER BAY.—Two miles W.S.W. from Rock Harbour is the entrance into Mortier Bay. On the west side of the entrance is a small harbour, named Beaubois, in which there are only 9 feet at low water. The course into Mortier Bay is N.N.E. for about 2 miles, and in it there are from 50 to 70 fathoms water, the land on each side being high; it then runs to the westward about 2 miles, and is nearly 2 miles wide. In the S.W. corner of the bay is a river, which runs to the S.W. about $5\frac{1}{2}$ miles. On the east side, at about 3 miles from the entrance, is an exceedingly good harbour, named *Spanish Room*, in which you may anchor in from 4 to 6 fathoms water, good bottom, and lie secure from all winds. There is not the least danger in sailing into this harbour, giving the low rocks above water at the entrance on the port hand a berth of one cable's length.

Crony Point and Island lie about $2\frac{1}{2}$ miles from the entrance of Mortier Bay. At about 2 miles farther southward, and about a mile westward of Mortier East Point, is Little Mortier Bay, on the west side of which, near the entrance, is a small round island, named Mortier Island, which is bold-to all round, and may be passed on either side. Close to the first point, beyond this island on the same side, is another small island, and about 2 cables' lengths from this island, in a line from Mortier Island, is a sunken rock, on which the sea breaks in bad weather. At the bottom of the bay, on the east side, lies Fox Cove, in which is very good anchorage, and room for one ship to moor in 9 fathoms, good holding ground; this cove is open to the sea from S.S.E. to S.E. The harbour of Little Mortier lies on the west side, and is a tolerable place for small vessels, but they must moor to the shore: in the entrance you have 7 fathoms water, but only 2 in the harbour; off the starboard point, going in, is a rock which is covered at high water.

Mortier West Head lies 2 miles W.S.W. from Mortier East Point, and a mile beyond it is Iron Island. At 2 leagues S.E. from Iron Island, and S.W. by W. 5 leagues from St. Jude, lies the *Mortier Bank*, the shoal part of which is about one league over, and, it is said, has not more than 4 fathoms on it. In bad weather the sea breaks very high on it.

Iron Island is a small high island. There is a rock under water off its S.W. point; at three-quarters of a mile to the southward of it is Gregory's Rock; S. $\frac{1}{2}$ W. a quarter of a mile from which is a shoal named Galloping Andrews; and S.E. by E. one mile from Iron Island is the White Horse, a shoal having 8 fathoms on it.

GREAT AND LITTLE BURIN HARBOURS.—The S.E. point of Great Burin Island lies S.W. $\frac{1}{2}$ W. one league from Iron Island; and W.N.W. $1\frac{1}{2}$ mile from it, is the north part of Pardy's Island. The harbours of Great and Little Burin lie on the main within these islands. Vessels bound for the harbours of Burin may pass on either side of Iron Island, the only danger in passing to the northward being the ledge, named the Brandys, which almost always break; they lie nearly a quarter of a mile to the southward of a low rock above water, close under the land of Mortier West Head. If the wind should take you ahead after you are within Iron Island, take care to keep Mortier West Head open to the westward of Iron Island, in order to avoid Gregory's Rock, on which are only 2 fathoms water, and which generally breaks. Vessels may pass with safety between this rock and Iron Island, taking care to give Iron Island a berth of one cable's length.

On the main, within Pardy's Island, are two conspicuous white marks in the rocks, the northernmost of which brought on with the north part of Pardy's Island and Iron Island, N.E. $\frac{1}{2}$ N., will lead on the Galloping Andrews, a shoal with 5 fathoms of water on it.

Great Burin Island lies N.N.E. and S.S.W.; it is 3 miles long, and high land. There is a revolving light on Dodding Head, Great Burin Island, which exhibits a brilliant white light every minute, with intermediate flashes at intervals of 20", at an elevation of 430 feet above the level of the sea, visible 25 miles; its position is lat. $47^{\circ} 0' 26''$ N., long. $55^{\circ} 8' 43''$ W. About a quarter of a mile from the easternmost part of Great Burin Island lies the Dodding Rock; and near the south end of the island is Cat Island, which is high and round, and lies E.N.E., about 4 miles, from Corbin Head. From Corbin Head to Shalloway Point the bearing and distance are N.E. $\frac{1}{2}$ N. $4\frac{1}{2}$ miles. Between them, and nearly in the same direction, lie Corbin and Little Burin Islands, both high and round, not more than a cable's length from the shore.

Shalloway Island lies N.N.W. $\frac{1}{2}$ W. nearly a mile from Cat Island, and N.E. by E. a quarter of a mile from Little Burin Island: the passage into Burin Harbours, from the southward, lies to the westward of Shalloway Island.

In sailing in, take care to give Poor Island a berth on your port hand; and when within Shalloway Island; you may anchor in safety between it and Great Burin Island, in from 12 to 18 fathoms. The best anchorage in Great Burin Harbour is in Ship Cove. The course up to it, after you are within Neck Point, which is to the westward of the Shalloway Island, is N.N.E. about $1\frac{1}{2}$ mile. It is about a quarter of a mile wide. In sailing up, keep the west shore on board, in order to avoid a sunken rock on the eastern shore, at about half way up, and about a cable's length from the shore. Directly off this there is a remarkable hole in the rock, on the same side; and a gully in the land, from top to bottom, on the western shore. Another rock, with $2\frac{1}{2}$ fathoms on it, lies above a cable's length to the S.W. of Harbour Point, which is round and green, and of moderate height, joined to Great Burin Island by a low, narrow, sandy neck.

Burin Bay is about a mile N.N.E. of Little Burin Island: it is clear, and about a mile wide every way: here ships may occasionally anchor, and lie almost land-locked. In this bay are two islands, one called Poor Island, low and barren; the other, which is high and woody, lies to the northward, before the entrance of Burin Inlet.

BURIN INLET may be entered on either side of the island; it extends up 5 miles: a little within the entrance on the east side, half a cable's length from the shore, is a rock covered at three-quarters flood; and $1\frac{1}{2}$ mile from the entrance, near the middle, is another rock, to the westward of which is good room, and good anchorage, in from 7 to 12 fathoms. There are 15 fathoms in the entrance; and, in the middle, two miles up, 15 to 23 fathoms; and thence up to the head are from 10 to 5 fathoms.

The east passage in is between Pardy's Island and Iron Island; but is not safe without a commanding wind, between the N.N.E. and S.E.

Corbin Harbour is about a mile to the northward of Corbin Head, and is a good harbour for small vessels. At a quarter of a mile eastward from this harbour, and 2 cable's lengths from the shore, is a sunken rock, of 5 or 6 feet water, on which the sea breaks in bad weather. Vessels bound for this harbour must also avoid a shoal of 2 fathoms water, which lies E.S.E. from the south point of the entrance about

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half a mile. The best anchorage is in the north arm, about half a mile within the entrance, opposite a cove on the starboard side.

Sauker Head is a high hill in shape of a sugar-loaf, off which, to the south-westward, lies a small rock, under water, close in with the land. From Sauker Head to Cape Chapeau Rouge, the bearing and distance are West, 4 miles; between lie the harbours of Great and Little St. Lawrence.

LITTLE ST. LAWRENCE lies to the eastward of the Great St. Lawrence. To sail into it you should keep the west shore on board, in order to avoid a sunken rock which lies a little without the point of the peninsula, which stretches off from the east side of the harbour. The best anchorage is in 3 or 4 fathoms water, on a fine sandy bottom, above the peninsula, which shelters you from all winds; there is also anchorage without the peninsula in 12 or 14 fathoms, on good ground, but entirely open to the S.S.E. winds. In this harbour are good fishing conveniences, and plenty of wood and water.

GREAT ST. LAWRENCE.—This harbour lies close to the eastward of Cape Chapeau Rouge. To sail into it, you should be careful with westerly, and particularly with S.W. winds, not to come too near the Hat Mountain, in order to avoid the flurries and eddy winds under the high land. There is no danger but what lies very near the shore, and the course in is first N.N.W. till you open the upper part of the harbour, then N. $\frac{1}{2}$ W. to the head of it. The best place for large ships to anchor is before a cove on the east side of the harbour, a little above Blue Beach Point, which is the first point on the west side, where you may lie in 12 or 13 fathoms water on good ground, only two points open. There is also anchorage anywhere between this point and the point of Low Beach on the same side near the head of the harbour, observing, that the ground near the west shore is not so good as the ground on the other side. Fishing vessels lie at the head of the harbour above the beach, sheltered from all winds.

GARDEN BANK, on which there are from 7 to 17 fathoms water, lies about half a mile off the entrance of Little St. Lawrence, with Blue Beach Point on with the east point of Great St. Lawrence.

CAPE CHAPEAU ROUGE TO CAPE RAY.

ABOUT one mile W.S.W. from Cape Chapeau Rouge is Ferryland Head, a high rocky island, just separated from the main; this together with Cape Chapeau Rouge serves as excellent marks for the St. Lawrence Harbours.

Laun Bay lies W.N.W. 5 miles from Ferryland Head, and has in the bottom of it two small inlets, named Great and Little Laun: the latter, which is the easternmost, lies open to the S.W. winds, and therefore is no place for anchorage. Great Laun runs in about N.E. by N. 2 miles; it is nearly half a mile wide, and has from 14 to 3 fathoms water: in sailing in, be careful to avoid a sunken rock, which lies about a quarter of a mile off the east point. The best anchorage is on the east side, about half a mile from the head, in 6 and 5 fathoms, tolerably good bottom, and open only to south and S. by W. winds, which cause a great swell. The head of this place is a bar harbour, where boats can ascend at half-tide, and find conveniences for fishing with both wood and water.

Laun Islands lie off the west point of Laun Bay, not far from the shore; the westernmost and outermost of them lies W.N.W., westerly, 10 miles from Ferryland Head. Nearly a quarter of a mile to the southward of this island is a rock, over which the sea breaks in very bad weather. There are other sunken rocks about these islands, but not dangerous, being very near the shore.

Taylor's Bay, about 3 miles to the westward of Laun Islands, is open to seaward. Off the east point are some rocks, nearly a quarter of a mile from the shore.

Point Aux Gauls is a low, narrow point of land, which stretches out a little to the westward of Taylor's Bay. A rock, above water, lies off it at half a mile from the shore, named Gauls Shag Rock, which bears from Ferryland Head W.N.W. $\frac{3}{4}$ W. 5 leagues: there are 14 fathoms close to the off-side of it, but some rocks on its inside.

From Point Aux Gauls Shag Rock to the Lamelin Islands, the bearing and distance are N.W. by W. a league: between is the Bay of Lamelin, which is unfit for shipping, being shallow, and having several islands and rocks about it. The river at

the bottom of the bay abounds with salmon. Near the south point of the westernmost Lamelin Island is a rock high above water, named Lamelin Shag Rock.

From Lamelin Shag Rock to Point May, the distance is 8 miles : between lie the Lamelin Ledges, which are very dangerous, some of them being 3 miles from the land. To avoid them, in the day-time, you should not bring the Lamelin Islands to the southward of E.S.E. until Point May bears N.E. by N., when you may steer northward between Point May and Green Island with safety. By night, approach no nearer than in 30 fathoms water.

When navigating this part of the coast, it is well to observe the appearance of the land, for Chapeau Rouge and Laun are very high and hilly close to the sea ; from Laun Islands to Lamelin, the land is only moderately high ; but from Lamelin to Point May, near the shore, it is low, with beaches of sand, while inland it becomes mountainous.

ST. PIERRE.—The island of St. Pierre, lying at 11 leagues W. by N. from Cape Chapeau Rouge, is about 4 leagues in circuit, and barren in the extreme, consisting of a mass of rugged hummocks rising to a height of 400 or 500 feet directly from the sea, and destitute of trees. On coming from the westward, *Galantry Head*, the south-east point of the island, makes in a round hummock, and the land near it being low, gives it the appearance of a small island ; it may also be recognised by its fixed light, which is 210 feet high, and visible 18 miles off. Near the lighthouse, in foggy weather, from April 1st to November 1st, two guns are fired every two hours, with an interval of 3 minutes between each, from 6 in the morning to 6 in the evening ; besides these regular signals, gun for gun is returned to vessels desirous of ascertaining their position by these means.

The port is on the eastern side of the island, at only a mile to the north-westward of Galantry Head, and is bounded on the east by Chien or Dog Island, eastward of which are two other islands, and several rocks. The passage in, between Dog Island and St. Pierre, is very narrow, and bordered with rocks, but in mid-channel are 6, 4, 3½, 5, and 6 fathoms. The harbour is small, and has from 20 to 12 feet water ; but there is a bar across the entrance, with only 6 feet at low water, and 12 or 14 at high water.

The road lies on the N.W. side of Dog Island, and will admit ships of any burthen in 8, 10, or 12 fathoms water. The best anchorage is on the north side ; but in general it is rocky, and exposed to the N.E. winds. Be cautious, in going in or out, of some sunken rocks, which lie about a mile E.S.E. from Vainqueur Island, which is the easternmost of the islands above mentioned.

Upon *Canon Point*, on the north side of the entrance to the inner harbour, in latitude 46° 46' 52" N., longitude 56° 7' 23" W., is a lighthouse, with a small fixed light, about a quarter of a mile eastward of the town, which is kept up from the 1st May to the 15th December, and only visible in the interior of the passage. With the lighthouse bearing W. by N. or W. ½ N. about two cables' lengths, there is anchorage in 5½ and 6 fathoms.

THE ISLAND OF COLOMBIER lies very near to the N.E. point of St. Pierre, and is rather high : between them is a passage one-third of a mile wide with 12 fathoms water. On the north side of the island is a rock, named Little Colombier ; and about one quarter of a mile E.N.E. from it is a sunken rock, named Basse du Colombier, with 2 fathoms on it.

GREEN ISLAND is about three-quarters of a mile in circuit, and low : it lies E.N.E. about 5 miles from St. Pierre, and nearly in the middle of the channel between it and Point May, on Newfoundland. On its south side are several rocks above and under water, extending 1½ mile to the W.S.W.

LANGLEY or LITTLE MIQUELON.—Langley Island lies to the N.W. of St. Pierre, with a passage of about 3 miles wide between, free from danger. It is about 8 leagues in circuit, of a moderate and equal height, excepting at the north end, which is a low point with sand-hills ; off which, on both sides, it is flat a little way ; but every other part of the island is bold-to. There is anchorage on the N.E. side of the island, near Seal Cove, in 5 or 6 fathoms, a little to the southward of the sand-hills, on a fine sandy bottom.

MIQUELON is joined to Langley by a long, narrow range of sand-hills, having a beach on each side. Miquelon is 4 leagues in length from north to south, and about 5 miles in breadth at the widest part. The middle of the island is high land,

named the High Lands of Dunne; but down by the shore it is low, excepting Cape Miquelon, which is a lofty promontory at the northern extremity of the island. On the S.E. side of the island is the little harbour of Dunne, a bar harbour admitting fishing-shallops at half-flood, but no way calculated for shipping.

Some rocks, named the Miquelon Rocks, extend off from the eastern point of the island, under the high land, $1\frac{1}{4}$ mile to the eastward; some are above and some under water; the outermost are above water, and there are 12 fathoms water close to them, with 18 and 20 a mile off. At N.E. $\frac{1}{2}$ E. about $4\frac{1}{2}$ miles from them, lies the Miquelon Bank, on which are 6 fathoms water.

The chief roadstead of the island is large and spacious; it lies towards the north end, and on the east side of the island between Cape Miquelon and Chapeau, which is a very remarkable round mountain near the shore, off which are some sunken rocks at a short distance, but everywhere else it is clear of danger. The best anchorage is in 6 or 7 fathoms, near the bottom of the road, over fine sandy ground, but exposed to easterly winds, which bring in a heavy sea; the mark is, the signal-staff in one with the church, in such a position as to hide Soldier's Point by Chatte Point.

The *Seal Rocks*, two in number, are above water, and lie about $1\frac{1}{2}$ league off from the north-west side of Miquelon. The passage between them and the island is very safe, and there are 14 or 15 fathoms water within a cable's length all round them.

The islands of St. Pierre, Langley, and Miquelon were ceded to France by England, on condition that no forts should be built on either; that no more than fifty men of regular troops should be kept there; and that they should have no military stores, or cannon capable of making a defence. During the late hostilities, these isles were annexed to the Government of Newfoundland, having been taken possession of by the British forces in May, 1793; but they have been restored to France, on the original conditions, by the treaty of 1814.

FORTUNE BAY.—Point May has a rocky islet at its point, and from thence the land turns N.N.E. towards Dantzic Cove and Point, and thence E.N.E. towards Fortune Head.

From Point May to Pass Island the bearing and distance are N. by E. 12 leagues. Between them is the entrance to Fortune Bay, which is about 22 or 23 leagues deep, and in which are numerous bays, harbours, and islands.

The Island of *Brunet* lies nearly in the middle of the entrance into Fortune Bay. It is above 5 miles in length, 2 in breadth, and of moderate height; the eastern part appears, in some points of view, like islands. On its N.E. side is a bay, wherein there is tolerable anchorage for ships, in 14 or 16 fathoms water, sheltered from southerly and westerly winds. In the bottom of the bay, at about a quarter of a mile from the shore, are some rocks, which must be avoided. Opposite to this bay, on the south-west side of the island, is a small cove, with 6 fathoms water. The islands lying off the west end of Brunet, to the southward, are named the Little Brunets, and, with Brunet, may be approached within a quarter of a mile all round.

The *Platte* or *Plate Islands* are three rocky islets, of a moderate height, the nearest of which lies W.S.W. one league from the west end of Great Brunet. The southernmost is about 2 miles farther off, and bears from Cape Miquelon E. $\frac{1}{2}$ S. $3\frac{3}{4}$ leagues; and in a direct line between Point May and Pass Island, 17 miles from the former, and 19 miles from the latter. E.S.E., a quarter of a mile from the Great Plate (which is the northernmost), is a sunken rock, over which the sea breaks, and this is the only danger about them.*

There are several strong and irregular settings of the tide, or currents, about the Plate and Brunet Islands, which seem to have no dependence on the moon and the course of the tides on the coast.

Sagona Island, which lies N.E. 2 leagues from the east end of Brunet, is about a mile across each way, of a moderate height, and bold to all round. On its western side there is a small creek admitting fishing-shallops, in the middle of the entrance to which is a sunken rock, rendering it difficult of access, except in very fine weather.

* It is said, however, that a vessel was lost through striking upon a rock lying $1\frac{1}{2}$ or 2 miles East (true) from the southernmost *Platte Island*.

A sand-bank surrounds this island, running westerly fully 7 miles, upon which are 14, 17, and 20 fathoms water.

Point May, the southern extremity of Fortune Bay, and the S.W. extremity of this part of Newfoundland, may be known by a great black rock, nearly joining to the pitch of the point, and a little higher than the land, which makes it look like a black hummock on the point. At about a quarter of a mile from this black rock are three sunken rocks, over which the sea always breaks.

DANTZIC COVES.—N. by E. $1\frac{1}{4}$ mile from Point May is Little Dantzic Cove; and 2 miles farther is Great Dantzic Cove. From Dantzic Point (which is the north point of the coves) to Fortune Head, the bearing and distance are E.N.E. $2\frac{1}{4}$ leagues; and thence to the Villa of Fortune, $1\frac{1}{2}$ mile S.E. by E. This is a fishing village; and the road where the ships lie has from 6 to 10 fathoms water, quite exposed to nearly half the compass. It lies S.S.W. from the east end of Brunet. To the N.N.-westward of Dantzic Point is the long narrow Bank of Jerseyman's, with 24 and 25 fathoms over it, extending from abreast of the point in the direction of the Plate Islands.

The Cape of Grand Bank is high, and lies one league E.N.E. from Fortune. To the eastward of this cape is Ship Cove, where there is good anchorage for shipping in 8 or 10 fathoms water, sheltered from south, west, and north-westerly winds. Grand Bank lies S.E. half a league from the cape, and is a fishing village, where there is no security for shipping, and the entrance is barred.

From the Cape of Grand Bank to Point Enragée, the course is E.N.E. $\frac{1}{2}$ E., distance 8 leagues. The coast between forms a circular bay, in which the shore generally is low, with several sandy beaches, behind which are bar-harbours, fit only for boats, of which the principal is Great Garnish, lying 13 miles eastward from the Cape of Grand Bank; it may be known by several rocks above water, lying before it, at 2 miles' distance from the shore; the outermost of these is steep-to, but between them and the shore are several dangerous sunken rocks. To the eastward, and within these rocks, is Frenchman's Cove, a convenient place for the cod-fishery, where small vessels sometimes run in and anchor in 4 or 5 fathoms water, tolerably well sheltered from the sea-winds. The passage in is situated to the eastward of the rocks that appear the highest above water; between them and some other lower rocks lying off to the eastward of the east point of the cove, there is a sunken rock nearly in the middle of the passage, of which you should be aware. The shore is bold all the way from Point May to the Cape of Grand Bank, there being 10 or 12 fathoms within 2 cables' lengths, and 30 or 40 at a mile off: between the latter and Great Garnish the water is not so deep, and ships may anchor anywhere in 8 or 10 fathoms water sheltered only from the land-winds.

From Point Enragée to the head of Fortune Bay, the course is, first, E.N.E. $\frac{1}{4}$ E., 3 leagues to Grand Jervey; then E. $\frac{3}{4}$ N., $7\frac{1}{2}$ leagues, to the head of the bay. The land, in general, along the south side is high, bold-to, and of uneven appearance, with hills and valleys of various extent, the latter abounding in wood, and having many fresh-water rivulets.

At 7 leagues to the eastward of Point Enragée is Bay L'Argent, where there is anchorage in 30 or 40 fathoms water, sheltered from all winds.

The entrance of Harbour Millé lies to the eastward of the east point of L'Argent. Before this harbour and Bay L'Argent is a remarkable rock, which, at a distance, appears like a shallop under sail. Harbour Millé branches into two arms, one lying to the S.E., the other to the East; at the head of both are good anchorages. Between this harbour and Point Enragée are several bar-harbours, or small bays, with sandy beaches, but the water all along the coast is very deep: you may safely anchor anywhere, but it must be very near the shore.

Cape Millé lies N.E. $\frac{1}{2}$ E. one league from the Shallop Rock, above mentioned, and nearly 3 leagues from the head of Fortune Bay; it is a high, reddish, barren, rocky point. The width of Fortune Bay at Cape Millé does not much exceed half a league; but, immediately below it, it becomes twice as wide, by which the cape may readily be known; and above this cape the land on both sides is high, with steep craggy cliffs. The head of the bay is terminated by a low beach, behind which is a large pond, or bar-harbour, fit only for boats. There are convenient places for building stages in this, and in all other bar-harbours between this and the Grand Bank, and good beaches for drying fish, available for the accommodation of numerous boats.

Grand le Pierre is a good harbour, situated on the north side of the bay, half a league from the head. The entrance cannot be seen until you are abreast of it. There is no danger in going in, and you may anchor in any depth from 8 to 4 fathoms, sheltered from all winds.

English Harbour lies a little to the westward of Grand Pierre; and to the westward of English Harbour is the Little Bay de l'Eau, both of which are small, and only fit for boats.

New Harbour is situated opposite to Cape Millé, and to the westward of the Bay de l'Eau. It is a small inlet, and has good anchorage on the west side, in from 8 to 5 fathoms, sheltered from S.W. winds.

The Harbour Femme lies half a league to the westward of New Harbour; it is narrow, and has in it 20 and 23 fathoms. Before its entrance is an islet, near to which are some rocks above water. One league to the westward of Harbour Femme is Brewer's Hole, fit only for boats, before which is also a small island near the shore, and some rocks above water.

Harbour La Conte is situated one mile to the westward of Brewer's Hole. Before this are some islands, the outer one of which is named the Petticoat Island, the inner, Smock Island. There are also two smaller ones between these, and one or two sunken rocks. The best passage in is on the west side of the outer island, and between the two large ones. As soon as you begin to open the harbour, keep the inner island close on board, to avoid some sunken rocks that lie near a small island, which you will discover between the N.E. point of the outer island, and the opposite point on the main; there is also another rock, appearing at low water, lying higher up on the side of the main; and when you get beyond these dangers, you may keep in the middle of the channel, and will soon open a fine spacious harbour, wherein you may anchor in any depth, in from 6 to 16 fathoms water, on a bottom of sand and mud, sheltered from all winds. There is a small cove to the eastward of the outer island, which is fit for small vessels and boats, and otherwise convenient for the fisheries.

Long Harbour lies 4 miles to the westward of Harbour La Conte, and N.E. by E. $\frac{1}{4}$ E., distant 5 leagues from Point Enragée. It may be known by Gull Island lying at its mouth, and a small rock half a mile without the island, having the appearance of a small boat. There is a passage into this harbour on each side of Gull Island, the western one of which is the broader of the two, and has nearly in the middle, a little outside of the island, a ledge of rocks whereon are 2 fathoms water; and a little within the island, on the eastern side, are other ledges, off two sandy coves at 2 cables' lengths from the shore, and visible at low water. Long Harbour runs up 5 leagues into the land; but the only anchoring place is in Morgan's Cove, on the N.W. side of the harbour, about 2 miles within Gull Island, in 15 fathoms water, unless you run above the narrows. There is a salmon-fishery at the head of the bay.

To the westward of Long Harbour is Hare Harbour, fit for small vessels only. Two miles to the northward of Hare Harbour is Mal Bay, having very deep water, extending north-easterly about 5 miles, but with no anchorage except at its farthest end. To the westward of Mal Bay, near the shore, lie the Rencontre Islands, the westernmost of which is the largest, and has a communication with the main at low water. In and about this island is shelter for small vessels and boats.

Belle Harbour lies 4 miles N.W. by N. from the largest of the Rencontre Islands. The passage into it is on the western side of the island; and so soon as you have passed the islands, you will open a little cove, on the east side, where small vessels can anchor, but large vessels must run up to the head of the harbour, and anchor in 20 fathoms, where there is most room; it is but an indifferent place. About $1\frac{1}{4}$ mile westward of Belle Harbour is Lally Cove, behind an island, fit for small vessels only; the west point of this cove, named Lally Head, is high and bluff. To the northward of this head is Lally Back Cove, where ships may anchor, in 14 or 16 fathoms water.

Two miles to the northward of Lally Cove Head, are East Bay and North Bay, in both of which there is deep water, but no anchorage near the shore. At the head of North Bay is the largest river in Fortune Bay, which appears to be a good place for the salmon-fishery, and hence is named Salmon River.

CINQ ISLES BAY lies to the southward of the North Bay, opposite to Lally Cove

Head, and affords tolerably good anchorage for large ships on the S.W. side of the islands, in the bottom of the bay. The north arm is a very snug place for small vessels, and salmon may be caught at its head.

A little to the southward of the Bay of Cinq Isles is Corben Bay, where there is good anchorage for any ships in 22 or 24 fathoms water.

About 2 miles south-eastward from Lally Cove Head are two islands, bold to all round, about a mile distant from each other. The north-easternmost of these is named Belle Island, and the other Dog Island. Between Dog Island and Lord and Lady Island, which lies off the south point of Corben Bay, somewhat nearer to the latter, is a sunken rock, with deep water all round it; and about a quarter of a mile to the north of Lord and Lady Island is a rock which appears at low water.

BANDE DE L'ARIER BAY lies on the west side of Belle Bay, and N. $\frac{1}{2}$ W. 3 leagues from Point Enragée. It may be known by a very high mountain over the bay, which rises almost perpendicularly from the sea, named Iron Head; Chapel Island, which forms the east side of the bay, is likewise high. The harbour lies on the west side of the bay, just within the point formed by a narrow low beach, and is a snug place. Between the harbour and Iron Head there is tolerably good anchorage in 18 or 20 fathoms.

Bande de L'Arier, or Bellorum Bank, has 7 fathoms water on it, and lies with the beach of Bande de L'Arier Harbour just open of the west point of the bay, and Boxy Point on with the north end of St. Jacques Island.

Two miles to the westward of Bande de L'Arier is the harbour of *St. Jacques*, which may be readily known by the island before it being high at each end, and low in the middle. The passage into the harbour is on the west side of the island, free from danger, as is the harbour, where you may anchor in from 17 to 4 fathoms.

About $1\frac{1}{2}$ mile to the westward of St. Jacques is the harbour of Blue Pinion; and a little to the westward of that is English Cove.

BOXY HARBOUR.—Boxy Point lies W. $\frac{3}{4}$ S. 6 miles from St. Jacques Island, and E.N.E. $\frac{1}{2}$ E. $12\frac{3}{4}$ miles from the east end of Brunet Island. It is of a moderate height, and is the point most advanced to the southward of any land on this shore of Fortune Bay. Boxy Harbour lies N.E. 3 miles from Boxy Point, in which there is anchorage, in 4 or 5 fathoms water, fine sandy ground: to sail in, bring Boxy Point open of a little black head just within the point named Friar's Head; as by following this direction you will keep the middle of the channel, and between the shoals which lie off each point of the harbour where the stages are.

W.N.W. one mile from Boxy Point is the island of St. John, and N.N.W., half a league from St. John's Island, is St. John's Head, high, steep, and craggy. Between St. John's Head and Boxy Point is St. John's Bay, quite exposed; in the bottom of it is the harbour, fit for boats only. On the north side of St. John's Head are two rocky islets, named the Gull and Shag, having at their west end several sunken rocks.

Great Bay de L'Eau is about $1\frac{1}{2}$ league to the northward of St. John's Head. In this bay there is good anchorage in various depths, sheltered from all winds. The passage in is on the east side of the island which lies in its entrance; for only very small vessels can enter to the westward.

To the westward of Bay de L'Eau, about 3 miles north from St. John's Head, is *Little Barrachais Bay*, on the west side of which there is good anchorage for large ships in 7, 8, or 10 fathoms; and both wood and water can be obtained with ease.

Harbour Britain lies to the westward of Little Barrachais, and N.N.E. $1\frac{1}{2}$ league from the island of Sagona. The heads which form the entrance are high, and lie from each other S.E. and N.W., distant about 2 miles. Near the east head is a rock above water. The only danger in going in is a ledge of rocks, stretching 2 cables' lengths from the south point of the S.W. arm, which is more than a mile within the west head. The only place for ships-of-war to anchor in is above this ledge, before the entrance of the S.W. arm,* in 16 or 18 fathoms, mooring nearly east and west; the bottom is very good, and plenty of wood and water are to be obtained here. Opposite to the S.W. arm is the N.E. arm, or *Jerseyman's Harbour*, which is capable of holding a great number of ships, secure from all winds, in 6, 7, and 8

* Or, Harbour Britain proper. Strangers chartered to load here are apt to pass this harbour, and run up to the head of what should be named the bay, which is uninhabited.

fathoms water; it has a bar at the entrance, on which there are 3 fathoms. The mark to sail over the bar, is the point of Thomson's Beach, which is the south point at the entrance into the S.W. arm, open of Jerseyman's Head, which is high and bluff, on the north side of the entrance into Jerseyman's Harbour; as soon as you open the harbour, haul up to the northward, and anchor.

From the west end of Harbour Britain Bay to Connaigre Head, the bearing and distance are W. $\frac{1}{2}$ N., 6 miles; between are Gull Island and Deadman's Bay, off which there is a bank stretching from the shore, between 2 and 3 miles, whereon the depths vary from 34 to 4 fathoms. The sea, during storms, will sometimes break for a considerable way out from Gull Island.

CONNAIGRE BAY.—From Connaigre Head, which is high and craggy, to Basseterre Point, the bearing and distance are N.W. $\frac{3}{4}$ W. 7 miles; between is Connaigre Bay, running about 4 leagues inland. In the mouth of the bay lie the Connaigre Rocks, above water, which may be approached very near, there being no danger but what shows itself; the channel between them and Connaigre Head is the safest, as a ledge of rocks extends a mile from the north shore, which renders the other channel rather dangerous.

Connaigre Harbour is nearly 5 miles above the head, within a point on the south side of the bay; it is very small, and the depth of water is 7 fathoms. The passage in is on the S.E. side of the island which lies before it. Abreast of this harbour, nearly in the middle of the bay, are two islands; and on the south side of the westernmost are some rocks above water.

Dawson's Cove is on the N.W. side of the bay, and bears N.N.E. about 4 miles from Connaigre Head, and W.N.W. 2 miles from the west end of the largest and westernmost island; the anchorage is in 6 or 5 fathoms, quite exposed to southerly winds.

Basseterre Point, which forms the west point of Connaigre Bay, is of moderate height, clear of wood, and bold-to; the shore from thence to Pass Island is likewise bold-to. Pass Island lies nearly W. by N. distant 3 miles from Basseterre Point.

Pass Island is the north-western extremity of Fortune Bay; it is a full mile in length, and narrow. From the north point of Miquelon it bears N.E. by N. 7 leagues, and from Point May N. $\frac{1}{2}$ E. 11 $\frac{1}{2}$ leagues. It is high, and lies near the shore. On its south-western side there are several rocks above water, which extend fully a mile from the island, and to the N.W. is a sunken rock about a quarter of a mile from it. There is a passage between this island and the main, about 2 cables' lengths wide, which is frequently traversed by small vessels, where they sometimes anchor, on a fine sandy bottom, in 6 fathoms water. The cod-fishery about this part is generally considered good and productive.

The general appearance of the land on the northern side of Fortune Bay is hilly, rising directly from the sea, with craggy barren hills, extending 4 or 5 leagues inland, having many rivulets and ponds, while that on the southern side of the bay has a very different appearance, having less of these rugged hills, and being better clothed with wood of a short brushy kind, giving to the country a green and fertile appearance.

In the night time, or in dark foggy weather, too much dependence should not be placed on the soundings in Fortune Bay, as in many places the water near the shores, and in the creeks and harbours, is often deeper than in the middle of the bay itself.

HERMITAGE BAY.—This extensive bay is bounded on the S.W. by Pass Island, and to the northward by the islands that form the Bay of Bonne and Great Jervis Harbour, and by the southern shores of Long Island, where it begins to narrow. At its entrance it is more than 2 leagues in width. In sailing along the southern coast from Pass Island, you will discover the Fox Islands, which are distant from Pass Island 10 miles. These islands are situated opposite to the entrance to Hermitage Cove, about three-quarters of a mile from the land, and are said to have good fishing about them. Off the northern Fox Island are several rocks above water, and a sunken rock lies also off the south side of this island. To enter Hermitage Cove, you should keep between the islands and the shore, borrowing somewhat towards the main land, where you will find 30, 32, and 37 fathoms water; here you will see the cove open, and may turn in south, having deep water and without the least danger; the anchorage is good, with every convenience for fishing, and plenty of both wood

and water. From hence Hermitage Bay runs in nearly West for 12 miles, with very deep water, until you get near the head, where it gradually lessens to 25 and 22 fathoms, and farther in to 9 fathoms; there is a small islet or two on the southern side, but no danger whatever.

Long Island, separating the Bay of Despair from Hermitage Bay, is of a square form, about 8 miles long and nearly 8 leagues in circuit. The eastern passage is very good, but narrow, and is between the east end of Long Island and the main; it is named the Passage of Long Island. The west entrance into the Bay of Despair, from Hermitage Bay, is by the west end of Long Island. About half a mile from its S.W. point are two rocks, above water, with deep water all round them.

There are four harbours on the south side of Long Island, the easternmost of which, named Galtaus, is but small, and lies near the south-east point of the island. The best channel into the harbour is on the west side of several rocky islands which lie at the entrance, wherein are 4 fathoms, but in the harbour there are from 15 to 24 fathoms.

The next is Picarre, which lies N. by E. half a league from the easternmost Fox Island. In entering this harbour keep near the west point, in order to avoid some sunken rocks off the other. The anchorage is in the first cove on the east side, in 9 or 10 fathoms, sheltered from all winds.

Round Harbour is the next, and is about 2 miles to the westward of Picarre. It is fit only for small vessels, the channel in being so narrow.

Long Island Harbour is the fourth, and lies about $2\frac{1}{2}$ miles from the west end of Long Island. This harbour has two arms, one running to the north, the other to the eastward; they are both very narrow, and have from 40 to 7 fathoms water: the eastern arm is the deeper, and affords the better anchorage. The passage in is on either side of an island which lies off the entrance, and has several rocks above water about it.

BAY OF DESPAIR.—The entrance of the Bay of Despair lies between the west end of Long Island and Great Jervis Island (which lies in the mouth of the harbour of that name). The distance between is $1\frac{1}{4}$ mile, and midway no bottom is found with a line of 280 fathoms. The Bay of Despair forms two capacious arms, one extending fully 8 leagues to the north-eastward, the other about 13 miles northward. In the N.E. arm are several smaller arms and islets, and tolerably good anchorage in several places: in the north arm there is very deep water, and no anchorage excepting in the small bays and coves which lie on each side of it; but in an arm of this bay which runs easterly there is a fine salmon-fishery, and wood in abundance. In the N.E. arm also there are good salmon-fisheries at Little River and Conne River. All the country about this part is mountainous and barren; but about the head of the bay it becomes level, and has abundance of wood, such as fir, pine, birch, witch hazel, spruce, &c.

GREAT JERVIS HARBOUR, situated at the west entrance into the Bay of Despair, is safe, with good anchorage in every part in from 16 to 20 fathoms, secure from all winds, and plenty of wood and water. The passage in is on either side of the Great Jervis Island; but the southernmost channel is the safest, there being no danger in it but the shore itself, while in the northern channel there are several sunken rocks. To sail in, you should bring the north point between the two rocks above water on the starboard side, and then steer directly in; this will carry you clear of some sunken rocks lying off the west point of the island, and appearing at low water. The entrance to this harbour may be known by the east end of Great Jervis Island, which is a high, steep, craggy point, named Great Jervis Head, and is the northern point of the south entrance to the harbour.

BONNE BAY lies about a league to the westward of Great Jervis Head, and nearly N. by E. distant 7 miles from Pass Island. It has several islands at its entrance, the westernmost of which is the largest and highest. The best passage in is to the eastward of the largest island, between it and the two easternmost islands. The bay runs in north, 4 miles, and there is no danger but what shows itself. You may go on either side of Drake Island, which is small, and nearly in the middle of the bay; between which, and two small islands on the west side of the bay, within Great Island, there is anchorage in 20 or 30 fathoms; but the best place for large ships is near the head of the bay, in 12 or 14 fathoms, clear ground, and convenience for wood and water. On the N.W. side of Great Island,

within the two small islands, is very good anchorage, in from 16 to 24 fathoms, secure from all winds; the entrance to this, from the bay, is to the northward of the two small islands. In sailing in or out of the bay, approach not too near the south point of Great Island, as there are some sunken rocks lying at a quarter of a mile from shore. A little to the westward of Bonne Bay is Mosquito Cove, a small inlet having from 30 to 47 fathoms water.

W.N.W. 4 miles from Bonne Bay is the entrance to the Bays of Facheux and Dragon; this entrance being very conspicuous at sea, the coast may here be readily known.

Facheux Bay, which is the easternmost branch, is very easily seen to seaward; it runs in N.N.E., 2 leagues, and is half a mile wide at the entrance, with deep water in most parts of it. On the west side of the bay are three coves, where ships may anchor, in from 10 to 20 fathoms. Dragon Bay runs in N.W. a league, and is nearly half a mile wide, with 60 or 70 fathoms water, and no anchorage excepting near the head; and then you must lie very near the shore. One mile to the westward of Facheux is Little Hole, with shelter for small craft; and a league to the westward of Facheux is Richard's Harbour, a place fit only for small vessels and fishing shallops, with 23 fathoms water in it.

HARE BAY lies N.W. by W. a league from Richard's Harbour, and runs in N.N.E. about 5 miles, being about one third of a mile wide, with deep water close home to both shores in all parts of it, except about a league up on the west side, where there is good anchorage, in from 8 to 15 fathoms, with plenty of wood and water; and also in a small cove about a mile up on the east side, where there are 30 fathoms, with gradual soundings to the shore.

About $4\frac{1}{2}$ miles N.W. from Hare Bay, and 4 miles N.E. from Hare's Ears Point, is Devil's Bay, a narrow inlet, extending a league to the northward, with deep water, and no anchorage until you come close to the head.

The *Bay of Rencontre* lies to the northward of Hare's Ears Point, and runs in N.W. 2 leagues. It has deep water in most parts of it, and is nearly half a mile wide at the narrowest part. The anchorage is in 30 fathoms, above a low woody point on the south shore, quite land-locked. Hare's Ears Point is large, with a ragged rock upon it, which, from some points of view, looks like the ears of a hare. It divides the bays of Rencontre and Chaleur, and bears N.W. $\frac{1}{2}$ W., 17 miles, from Pass Island. Off this point is a fishing bank, extending a full mile from the shore, having from 20 to 36 fathoms over it.

Two miles to the westward of Hare's Ears Point is the *Bay of Chaleur*, which runs in about 2 leagues N.N.W. It is very narrow, and has deep water in most parts. At the northern side of the entrance into the bay, and close to the land, is a small island, of moderate height; and half a league within the island, on the N.E. side of the bay, is a rock above water; a little within this rock, on the same side, is a small cove with a sandy beach, off which you can anchor in 28 fathoms, a cable's length from the shore.

West, nearly half a league from the Bay of Chaleur, is *Bay Français*, a small inlet, running in N.W. $\frac{1}{4}$ W. a mile, being at the entrance about a quarter of a mile broad, and 17 fathoms deep; but just within are 50 and 60 fathoms; at the head are from 30 to 20 fathoms, good anchorage, and very convenient for carrying on the fishing business.

Westward, 4 miles from the Bay Français, on the east side of Cape la Hune, lies *Oar Bay*: off the east point of the entrance to which is a low rocky islet, and in the entrance of the bay is another, with a passage on each side of it. The bay runs in N.N.E. about 4 miles, and is one-third of a mile wide, with deep water close to both shores all the way up; at the head is a harbour for small vessels, with only 5 fathoms water. At the west side of the entrance into the bay is a small cove named Cul de Sac, with 3 and 4 fathoms water, and good shelter for small vessels.

CAPE LA HUNE is the southernmost point of land on this part of the coast, and lies in lat. $47^{\circ} 32'$ N. and long. $56^{\circ} 53'$ W., bearing W.N.W. $\frac{1}{2}$ N. $8\frac{1}{2}$ leagues from Pass Island, and N.N.W. $\frac{1}{2}$ N. 10 leagues from Cape Miquelon. Its figure much resembles a sugar-loaf; and it may also be known by the high land of La Hune, which lies a league to the westward of it, appearing flat at the top, and visible from a distance of 16 leagues.

THE PENGUIN ISLANDS lie W.S.W. $\frac{1}{4}$ S. $10\frac{1}{2}$ miles from Cape La Hune, and

N.W. $\frac{1}{2}$ N. 10 leagues from Cape Miquelon: they are an assemblage of barren rocks lying near to each other, and altogether about 2 leagues in circuit, and may be approached in the daytime to the distance of half a league all round. On the W.S.W. side of the large island, which is the highest, is a small cove, fit for shallops, and convenient for the fisheries; the ground about it is considered to be good for fishing.

E.S.E. 7 miles from the Penguin Islands, and S. by W. 3 leagues from Cape la Hune, lies the *Whale* or *La Hune Rock*, on which the sea generally breaks; it is about 100 fathoms in circuit, with 10, 12, and 14 fathoms water close to all round it. From this rock a narrow bank extends a league to the westward, and half a league to the eastward, with from 24 to 58 fathoms water on it, rocky and gravelly bottom. In the channel between the shore and this rock, and also between the shore and the Penguin Islands, are 120 and 130 fathoms of water, muddy bottom; and there is the same depth of water at a league without them.

LA HUNE BAY lies close to the westward of Cape la Hune; it is about 2 leagues deep, and $\frac{1}{3}$ of a mile wide, with deep water in most parts of it; but there is a sunken rock which lies off the west point of the entrance, nearly one-third over the channel; therefore, in sailing in or out of this bay, you should keep the eastern shore on board.

Two miles up the bay is Lance Cove, having anchorage in 14 and 16 fathoms water, good clean ground. A cable's length off the southern point of this cove is a small shoal, with 9 feet water; and between it and the point there are 5 fathoms. To sail into this place keep the east point of the bay open of a red cliff point, off which is a rock above water, until the round hill over the valley of the cove is brought on with the north side of the valley; you will then be above the shoal, and may haul into the cove with safety. There is a narrow bank which stretches quite across the bay, from the south point of the cove to the opposite shore, whereon are from 27 to 45 fathoms.

La Hune Harbour lies half a league to the westward of Cape la Hune, is fit only for small vessels, and open to westerly winds; before it lies an island near the shore. The channel into the harbour is on the N.W. side of the island; there is no danger going in, and you must anchor close up to the head, in 10 fathoms water. This harbour is well adapted for the fishery, there being good fishing ground about it, and a large beach quite across from the head of the harbour to La Hune Bay, a space of 800 feet, exposed to the open air, and well calculated for drying fish.

Four leagues N.W. $\frac{3}{4}$ W. from Cape la Hune is the entrance of *Little River*, which is about 100 fathoms wide at the entrance, and 10 fathoms deep; a little way up there is anchorage in 10, 8, and 7 fathoms water, good ground. Between Cape la Hune and Little River the land is tolerably high, and forms a bay, where there are several small islands and rocks above water, the outermost of which lies N.N.E. $\frac{1}{2}$ E. 3 leagues from the Penguin Islands, and are called the Magnetic Rocks.

S. by W. $\frac{1}{2}$ W. 7 miles from the entrance of Little River, and N. by W. $\frac{1}{2}$ W. from the Penguin Islands, lie the Little River Rocks, which are just above water, with very deep water all round them.

THE RAMEA ISLES, which are of various extent, both in height and circuit, lie N.W. $\frac{1}{2}$ N. $5\frac{1}{2}$ leagues from the Penguin Islands, and a league from the main. They extend east and west 5 miles, and north and south 2 miles, and have several rocks and breakers about them; but more on the south side than on the north. The easternmost island is the largest, and is high and hilly; the westernmost, called Columbe, is a remarkably high, round island, of small circuit, with some rocky islands and sunken rocks near it.

There is a harbour for small vessels, formed by the islands which lie near Great Ramea and the Colum., named Ramea Harbour, where they may lie sheltered from all winds. To enter this from the westward, you should give the southern point a berth, on account of some rocks that lie off the starboard island, all of them being above water; steer E.N.E. towards the harbour, keeping as nearly mid-channel as you can,—the passage is above a cable's length broad,—and run for the anchorage in Ship Cove. This is the second inlet on the north-western shore; you will here ride safely, on clean ground, in 5 fathoms water. To enter from the eastward, you must keep the northern side of Great Ramea on board, until you arrive at the west end

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thereof, then steer S.W. into the harbour, keeping in the middle of the channel, in about 3 fathoms, and anchor as before directed. This harbour is very convenient for fishing vessels, as in it, and also about the islands, are several places fit for erecting stages and drying fish, which seem to be well calculated for that purpose.

The *Ramea Rocks* are two in number, close to each other, lying about South, 4 miles from the east end of Great Ramea. W.S.W., distant 3 miles from these rocks, is a small bank, with only 6 fathoms water on it: and nearly in the middle, between Ramea and the Penguin Islands, is the New Bank, with from 14 to 30 fathoms water. To run upon the shoalest part of this bank, bring the two Ramea Rocks in one with the south-western part of Ramea Islands, and between them and Columbe: and the entrance of Little River N.E. $\frac{3}{4}$ E.

Four miles to the westward of Little River is *Old Man's Bay*, which runs in N.N.E. about 7 miles, and is nearly a mile wide; the water throughout the bay is very deep. About $1\frac{1}{2}$ mile up the bay on the eastern side is a small island named Adam's Island, behind which vessels can ride, if necessary, in 30 and 40 fathoms: but the best anchorage is at the head, in 14 or 16 fathoms.

Mosquito Harbour lies about half a league to the westward of Old Man's Bay. It is a snug and safe harbour, and will hold a great number of vessels in perfect security: but the entrance is so narrow, being only 48 fathoms in breadth, that it is difficult to get in or out. The land on both sides is high; and off the southern point of entrance is a large white rock, about a cable's length from which is a black rock, above water, having on its southern side a sunken rock, whereon the sea breaks; from this black rock to the entrance of the harbour, the course is about N.N.W., distance, one-third of a mile. In sailing either in or out, you should give the black rock a small berth, keeping the western shore on board, and if obliged to anchor, be as quick as possible in getting a rope on shore, lest you drift on the rocks. In this harbour you will have from 18 to 30 fathoms water, with good riding everywhere, and plenty of both wood and water. In the narrows you will find 12 fathoms, the shores being bold-to. South and easterly winds blow right in, northerly winds right out; and with westerly winds it is commonly either quite calm, or descends in irregular puffs.

Fox Island Harbour is formed by an island of the same name; it lies about half a league to the westward of Mosquito Harbour; between are several rocky islands and sunken rocks. This is a commodious harbour for small vessels, which may anchor in 8, 9, and 10 fathoms water. You may go in on either side of the island, and there is no danger but what shows itself.

WHITE BEAR BAY.—This bay lies about 2 miles to the westward of Fox Island Harbour, and N.N.E. one league from Great Ramea Island; it has several islands at its entrance. It runs in N.E. $\frac{3}{4}$ N. about 4 leagues, is nearly half a mile wide in the narrowest part, and has deep water close to both shores in most parts, to the distance of 8 miles up; then the ground rises at once to 9 fathoms, whence it shoals gradually to the head, with good anchorage. The best passage into the bay is to the eastward of all the islands. On the S.W. side of Bear Island, which is the easternmost and largest in the mouth of the bay, is a small harbour, running in about east, half a mile, with from 10 to 22 fathoms of water: but there are several sunken rocks before its mouth, rendering it difficult of access. At the west entrance is a high, round, white island; and S.W. half a mile from this island is a black rock, above water. The best passage into the bay, from the westward, is to the westward of this black rock, and between White and Bear Islands; some of the rocks are above a mile off the land.

At 5 or 6 miles to the westward of White Bay, and nearly north from Ramea Columbe, are two small harbours, named *Red Island Harbours*, formed by Red Island, which lies close under the land. The westernmost is the largest and best, and has from 6 to 8 fathoms water, good anchorage. In going in, keep the island close on board, the outer part of which is composed of steep red cliffs; hence its name.

THE BURGEO ISLES * are a cluster of islands extending about 5 miles along

* The coast hence to Cape Ray is thickly strewn with dangers, which with the very frequent fogs render the navigation exceedingly difficult. Ships bound into the Gulf should therefore give this part a wide berth.

shore, and forming several snug and commodious harbours. They lie about 9 miles N.W. by W. from Ramea Columbe. To sail into Burgeo from the eastward, the best passage is on the N.E. side of Boar Island, which is the northernmost, and lies N.N.W. from Ramea Columbe. S.E. by S. from this island, half a league, is a rock, uncovered at low water, on which the sea generally breaks; you may go on any side of this rock, the water being deep all round it: as soon as you are to the N.W. of it, keep the north side of Boar Island on board, and steer W. $\frac{1}{2}$ N. for Grandy's Cove, the north point of which is the first low point on your starboard bow; haul round that point and anchor in the cove, in 14 fathoms, and moor with a fast on shore. The best place for large ships to anchor in is, betwixt Grandy's Cove and a small island lying near the west point of Boar Island, in 20 or 24 fathoms, good ground, and sheltered from all winds. To sail into Grandy's Cove from the westward is dangerous, unless well acquainted; there are several safe passages in from the southward and eastward, between the islands, and good anchorage; and in bad weather, all the sunken rocks discover themselves: you may, therefore, run in any without fear. The islands do not afford either wood or water.

Wolf Bay extends inwards N.E. by E. a league; the entrance is E.N.E., 2 miles from Boar Island, and 2 miles to the westward of Red Island Harbour. The east point of the entrance is composed of low rugged rocks, off which is a sunken rock, at a distance of a quarter of a mile from shore, whereon the sea breaks in bad weather. Near the head of the bay is tolerably good anchorage, and plenty of wood and water.

King's Harbour lies round the west point of Wolf Bay, and runs in N.E. by E. $\frac{3}{4}$ of a mile; before its mouth is a cluster of little islands. To sail in, keep the east point of these islands on board, and steer N. by W. and North for the entrance of the harbour, anchoring under the east shore, in 9 fathoms.

HA-HA.—On the south side of the islands before King's Harbour, and nearly North, a mile from Boar Island, is the entrance into the Ha-Ha, which runs in W.N.W. a mile, and is about a quarter of a mile broad, with from 20 to 10 fathoms water, and good ground all over. Over the south point of the entrance into this harbour is a high green hill; and $1\frac{1}{2}$ cable's length from the point is a sunken rock, that always shows itself. Over the head of the Ha-ha is Richard's Head, a mark for running upon Ramea Shoal.

About 4 miles to the westward of the Burgeo Isles is the Great Barachais Point, which is low, white, and rocky; and E.N.E. $\frac{1}{2}$ E., half a league from this point is the west entrance into the Great Barachais, wherein is room and depth of water for small vessels. Between the Burgeo Isles and the Great Barachais Point, are several sunken rocks, some of which are half a league from the shore.

CONNOIRE BAY.—N.W. $\frac{1}{2}$ N., 4 leagues from the Burgeo Isles, is the east point of the Bay of Connoire. This point is so far remarkable, that it rises with an easy ascent to a moderate height, and much higher than the land within it; the west point of the bay is low and flat, and to the westward of this are several small islands. The bay runs in N.E. by N., about a league, (from the east point to the middle head, where it divides into two arms,) and is half a league in width, with 14, 12, 10, and 8 fathoms, close to both shores; it affords good anchorage, with clear ground, but open to S.W. winds. The N.E. arm affords shelter for small vessels from all winds. To sail in, keep nearest the starboard shore, and anchor before a small cove on that side, near the head of the arm, in $3\frac{1}{2}$ fathoms. Towards the head of the arm on the north-western side is a bank of mud and sand, upon which a vessel may run, if necessary, and receive no damage.

THE BAY OF CUTTEAU lies about 2 leagues to the westward of Connoire, and will admit small vessels only. Round the west point of Cutteau is Cinq Serf, wherein are a number of islands, which form several small snug harbours. Right off Cinq Serf, about half a league from the shore, is a low rocky island, named Capt Island, westward of which is the safest passage into the largest harbour: keep near this rock, steering E.N.E. $\frac{1}{2}$ E. towards the south-eastern shore, until you get abreast of a small woody island: this is the easternmost except one, and lies about a quarter of a mile E.N.E. from a white rock in the middle of the channel; haul short round this island, and anchor behind it in 7 fathoms water, here you will lie safely, sheltered from all winds, or you may go farther up, and anchor at the head of the bay, in 4 fathoms.

Four miles to the westward of the rocky island of Cinq Serf, is the harbour of *Grand Bruit*, which is small but commodious, and may be known by a very high and remarkable mountain over it, half a league inland, which is the highest land on all the coast; down this mountain runs a considerable brook, emptying itself by a cascade into the harbour. Before the mouth of the harbour are several little islands, the largest of which is of middling height, with three green hillocks on it. A little outside of this island is a round rock, rather high above water, named the Columbe of Great Bruit; and a quarter of a mile to the southward of this rock is a low rock; in a direct line between the low rock and the rocky isles of Cinq Serf, half a league from the former, is a sunken rock, whereon the sea does not break in fine weather. The safest passage into Grand Bruit is to the north-eastward of this rock, and of the islands lying before the harbour, between them and the three islands (which are low, and lie under the shore); and after you are to the northward of the sunken rock above mentioned, there is no danger but what shows itself. The harbour extends N.N.E., half a mile, and is but a quarter of a mile wide in the broadest part; but it is bold-to on both sides, and has a depth of from 4 to 7 fathoms.

To the westward of Grand Bruit, between it and La Poile Bay, lies the Bay of Rotte, wherein are a great many islands and sunken rocks. The southernmost is a remarkable high round rock named the Columbe of Rotte, which lies N.W. by W. $8\frac{1}{2}$ leagues from the southernmost of the Burgeos. Between this island and Grand Bruit is a reef of rocks, some above and some under water, but they do not lie to the southward of the direct line between the islands.

Within the islands of Rotte there is shelter for shipping: the safest passage in is to the westward of the islands between them and Little Ireland, which lies off the east point of La Poile Bay.

LA POILE BAY.—This bay is 36 miles E.N.E. from Cape Ray, large and spacious, and has several commodious harbours. It may be known by a beacon on the western point of entrance, by the high land of Grand Bruit, which is only 5 miles eastward of it, and by the land on the east side of the bay, which rises in remarkably high craggy hills. About $1\frac{1}{4}$ mile S.W. from its east point lies Little Ireland, a small low island with a large beacon upon it, and environed with sunken rocks, some of which are one-third of a mile off. North, about half a mile from Little Ireland, is a sunken rock that shows itself at low water; this is the only danger in going into the bay, excepting such as lie very near the shore.

Two miles within the west point of the bay, and N. $\frac{1}{2}$ W. 2 miles from Little Ireland, is Tweeds, or Great Harbour: its south point is low, and it extends inwards W.N.W., a mile; it is about $1\frac{1}{2}$ cable's length wide in the narrowest part, and the anchorage is near the head of the harbour, in 18 or 20 fathoms, clear ground, and sheltered from all winds. At half a mile northward of Great Harbour, is Little Harbour, the north point of which, named Tooth's Head, is the first high bluff head on the west side of the bay; the harbour extends inwards W.N.W., about a mile. In sailing in, give the south point a small berth. You may anchor about half-way up the harbour, in 10 fathoms water, before the stage which is on its northern side.

Gally Boy's Harbour lies on the east side of the bay, opposite Tooth's Head; it is small, snug, and convenient for ships bound to the westward. The north point is high and steep, with a white spot in the cliff, and near its southern point are some hillocks close to the shore. To sail in or out, keep the north side on board. You must anchor so soon as you are within the inner south point, in 9 or 10 fathoms good ground, and sheltered from all winds. One mile to the northward of Gally Boy's Harbour, between two sandy coves on the east side of the bay, and nearly 2 cables' lengths from the shore, is a sunken rock, that just uncovers at low water.

Broad Cove is about 2 miles to the northward of Tooth's Head, on the same side of the bay. In this there is good anchorage in 12 or 14 fathoms.

The N.E. Arm lies about 2 leagues from the entrance of the bay, on the eastern side; and forms a spacious, safe, and commodious harbour. In sailing in, give the low sandy point on the S.E. side a small berth, and anchor above it, where convenient, in 10 fathoms water, good holding ground, sheltered from all winds, and very convenient for wood and water.

Indian Harbour and De Plate lie just within the outer west point of La Poile Bay; these are two small coves conveniently situated for the fishery, but fit only for small vessels which may get in at high water.

Little Ireland bears from the southernmost of the Burgeos N.W. by W. $\frac{1}{4}$ W., $9\frac{3}{4}$ leagues; and lies nearly 11 leagues to the eastward of Cape Ray.

From Little Ireland to Harbour la Coue, and La Moine Bay, the course is W.N.W. $\frac{3}{4}$ W., 9 or 10 miles; between lies the *Bay of Garia*, and several coves, fit only for small vessels, before which there are many islands and sunken rocks scattered along the shore, but none of them lie without the above course. In bad weather, all the sunken rocks discover themselves. To sail into Garia Bay, you will, in coasting along shore, discover a white head, which is the south point of an island, lying under the land, off the eastern point of the bay, and a little to the westward of two green hillocks on the main: bring this white point N.N.E., and steer directly towards it; keep between it and the several islands that lie to the W.S.-westward. From the white point, the course into the bay is N. by W.: borrow towards the eastern point, which is low. The Bay of Garia affords plenty of timber, large enough for building ships.

The S.W. point of the entrance into *Harbour la Coue*, named Rose Blanche Point (near to which are some rocks above water), is tolerably high, and the land near the shore over Harbour la Coue and La Moine Bay is much higher than any other land in the vicinity: by this the harbours may be known. La Moine Bay extends inwards $3\frac{1}{2}$ miles, about 4 miles, and is one quarter of a mile broad in the narrowest part. On the east point are some small islands and rocks above water. In sailing in, keep the west point on board, until you have entered the bay; then edge over towards the east shore, and run up to the head of the bay, where you may anchor in 10 or 11 fathoms, good ground: here is plenty of wood and water.

To sail into Harbour la Coue, which lies at the west entrance into La Moine Bay, steer in N.N.W., between a rock above water, in the mouth of the harbour, and the west shore; as soon as you are within the rock, haul to the westward into the harbour, and anchor in 6 or 8 fathoms water, mooring with a hawser on shore: or you may steer into the arm, which runs in N.E. by E. from the harbour, and anchor in 20 fathoms, sheltered from all winds. This has been the resort of the small fishing vessels for many years.

To the westward of *Rose Blanche Point* is the harbour of the same name; it is small and snug, and the anchorage is in 9 fathoms water. The channel into the harbour is between the island lying off its western point, and Rose Blanche Point; give the island a good berth, on account of some sunken rocks which lie on its eastern side, and keep the west side of the small island which lies close to the point on board, then anchor within the N.E. point of this island in 9 fathoms. To enter into the N.W. part of the harbour would be dangerous, if a stranger, because of its numerous islands and rocks.

Mill Face is a small cove, 2 miles to the westward of Rose Blanche Point, wherein is anchorage for small vessels in 4 fathoms. Off the west point of the cove are two small islands, and several sunken rocks; the passage in is to the eastward of these.

Seven miles to the westward of Rose Blanche Point are the Burnt Islands, which lie close under the shore, and are not easily to be distinguished from it; behind these is shelter for small vessels. Off these islands are sunken rocks, some of which are half a mile from the shore.

Six miles to the westward of Rose Blanche Point, are Conney and Otter Bays, both of which are rendered difficult of access by several sunken rocks outside the passage, which do not show themselves in fine weather; but when once you are safe within Otter Bay, there is good riding in 7, 8, and 9 fathoms water.

DEAD ISLANDS HARBOUR.—W.N.W. $\frac{3}{4}$ W., nearly 4 leagues from Rose Blanche Point, are the Dead Islands, which lie close under the shore. In the Passage to Dead Islands Harbour, between the islands and the main, is good anchorage for shipping in 6 or 8 fathoms, sheltered from all winds; but it is very dangerous of access to strangers, as there are several sunken rocks in both the east and west entrances. The eastern entrance can be known by a remarkable white spot on one of the islands; bring this spot to bear N. by W., and steer in for it, keeping the starboard rocks on board, and leave the white spotted island on your port side. The western entrance may be recognised by a high point on the main, a little to the westward of the islands, on the western part of which point is a green hillock; keep this point close on board, until you get within a little round

rock, near to the westernmost island, at the eastern point of entrance; then haul over to the eastward for the great island, distinguished by a high hill, and steer E. $\frac{1}{2}$ N., keeping the before-mentioned little rock in sight.

PORT AUX BASQUE.—From the Dead Isles to Port aux Basque, the course and distance are W.N.W. about 4 miles; between lie several small islands close under the shore, and there are sunken rocks, some of which are half a mile from the shore. Port aux Basque is a small commodious harbour, lying about $2\frac{1}{2}$ leagues to the eastward of Cape Ray. To fall in with it, bring the Sugar-Loaf Hill over Cape Ray to bear N.N.W. $\frac{1}{2}$ W., or the west end of the Table Mountain N.N.W. Steer in for the land with either of these marks, and you will fall directly in with the harbour: the S.W. point, named Channel Head, is of a moderate height, and of white appearance; but the N.E. point is low and flat, and has, close to it, a black rock above water. In order to avoid the S.E. Shoal, on which are 4 fathoms, and which lies S.E. $\frac{3}{4}$ E., $\frac{2}{3}$ of a mile from Channel Head, bring the flag-staff which is on the hill north-westward of the head, on with the west point of Road Island, N.W. by N.: that direction will lead you in the middle of the channel, between the East and West Baldwin Rocks, the former of which always show themselves, and these you leave on your starboard hand: continue this course up to Road Island, and keep the west point of that island on board, in order to avoid the Pancake Rock, which stretches out from a cove on the west shore, opposite the island.

As soon as you are above the island, haul to the E.N.E., and anchor between it and Harbour Island where you please, in 9 or 10 fathoms, good ground, and sheltered from all winds; this is named the Road, or Outer Harbour, and is the only anchoring place for men-of-war, or ships drawing a great depth of water, but small vessels always lie up in the Inner Harbour. To sail into it, run in between the west shore and the S.W. end of Harbour Island, and anchor behind the said island, in 3 or 4 fathoms. In some parts of this harbour ships can lay their broadsides so near to the shore as to reach it with a plank. This place has been frequented by fishermen for many years; it is well situated for their purposes, and is capable of most excellent accommodations. A mile to the eastward of Basque is Little Bay.

GRAND BAY lies about 2 miles to the westward of Port Aux Basque; there are several small islands and rocks in and before it, the outermost of which are not above a quarter of a mile from the shore; on these the sea generally breaks. It is only fit for small vessels.

From Port aux Basque to Point Enragée, the bearing and distance are W.N.W., about a league, and thence to Cape Ray, N.N.W., nearly $1\frac{1}{2}$ league. Point Enragée is low; off it, and to the eastward of it, are some sunken rocks, a mile from the shore, whereon the sea breaks.

CAPE RAY, or SPLIT CAPE, the S.W. extremity of Newfoundland, is situated in latitude $47^{\circ} 37' N.$, and longitude $59^{\circ} 18' W.$ The land of the cape is very remarkable; near the shore it is low, but 3 miles inland is a very high table mountain, which rises almost perpendicularly from the low land, and appears to be quite flat at the top, excepting a small hillock on the S.W. point of it. This land may be seen, in clear weather, from the distance of 16 or 18 leagues. Close to the foot of the table mountain, between it and the point of the cape, is a high round hill, resembling a sugar-loaf (named the Sugar-Loaf of Cape Ray), whose summit is a little lower than that of the table mountain; and to the northward of this hill, under the table mountain, are two other conical hills, resembling sugar-loaves, which are not so high as the former; one or other of these sugar-loaf hills are, from all points of view, seen detached from the table mountain.

There is a sandy bay between Cape Ray and Point Enragée, wherein ships may anchor with the winds from N.N.W. to East, but they should be cautious not to be surprised there with S.W. winds, which blow directly in, and cause a great sea. The ground is not the best for holding, being fine sand. Towards the east side of this bay is a small ledge of rocks, a mile from shore, on which the sea does not break in fine weather. The best place for large ships to anchor in is, to bring the point of the cape N.W., and the high white sand-hill in the bottom of the bay N.E., in 10 fathoms water. Small vessels may lie farther in. Be careful not to run so far to the eastward as to bring the end of the table mountain on with the sand-hill in the

bottom of the bay, by which means the ledge of rocks, before mentioned, will be avoided.

N.W. $\frac{1}{2}$ W., nearly a mile from the point of the cape, is a small ledge of rocks, named the Cape Rocks, whereon the sea always breaks; and one mile to the northward of the cape, close under the land, is a low rocky island. There is a channel between the ledge and the cape, with 14 and 15 fathoms water; and also between it and the island with 4 and 5 fathoms; but the tides, which run here with great rapidity, render it unsafe for shipping.

The soundings, under 100 fathoms, do not extend above a league from the land to the southward and eastward of the cape, nor to the westward and northward of it, except on a bank which lies off Port aux Basque, between 2 and 3 leagues from the land, whereon are from 70 to 100 fathoms, good fishing ground. S.E. $\frac{1}{2}$ S., about 13 leagues from Port aux Basque, in the latitude of $47^{\circ} 14' N.$, is said to be a bank, whereon are 70 fathoms.

THE TIDES.—Between Cape Chapeau Rouge and Cape Ray, in all the bays, &c., the tide generally flows till 9 o'clock, on full and change, and its perpendicular rise is about 7 or 8 feet on springs; but it must be observed, that the tides are everywhere influenced by the winds and weather. On the coast, between Cape Chapeau Rouge and St. Pierre, the current sets generally to the S.W. On the south side of Fortune Bay it sets to the eastward, and on the north side to the westward. Between Cape La Hune and Cape Ray, the flood sets to the westward in the offing, very irregularly; but generally 2 or 3 hours after it is high water by the shore. The tide, or current, is inconsiderable, excepting near Cape Ray, where it is strong, and at times sets quite contrary to what might be expected from the common course of the tides, and much stronger at one time than at another: these irregularities seem to depend chiefly on the winds.

WEST COAST OF NEWFOUNDLAND.

CAPE RAY TO CAPE NORMAN.

CAPE ANGUILLE bearing N. $\frac{1}{2}$ E., 17 or 18 miles from Cape Ray, is the northernmost point of land you can see, after passing to the westward of Cape Ray; it is high table-land, and the country above it is covered with wood. Between the high land of the two capes, the coast is low, and the shore forms a bay, wherein are the great and little rivers of Cod Roy; the northernmost, or Great Cod Roy River, is a barred-harbour, which, at high water, will only admit vessels whose draught does not exceed 8 or 10 feet. The shore between the two capes may be approached to about half a league, there being no danger at that distance off it. It is a good salmon-fishery, and is adapted for building small vessels and boats, there being timber in abundance.

The Island of Cod Roy lies $1\frac{1}{2}$ or 2 miles to the southward of Cape Anguille, close under the high land, and is a low, flat, green island, of nearly 2 miles in compass, in the shape of a horse-shoe, forming, between it and the main, a small snug harbour for vessels of 10 or 12 feet draught, the safest entrance to which is from the southward.

Cod Roy Road lies south-eastward from the island, and affords good anchorage for shipping, in 8, 7, or 6 fathoms, on a clay bottom. With the south point of the island bearing about W.N.W., and the point of the beach on the inside of the island, at the south entrance into the harbour, on with a point on the main to the northward of the island, you will lie in 7 fathoms, and nearly half a mile from the shore. A league to the southward of Cod Roy Island is a high bluff point, named Stormy Point, off which a shoal stretches out a full half mile; this point covers the road from the S.S.E. winds, and there is good anchorage all along the shore, between it and the island.

ST. GEORGE'S BAY.—From Cape Anguille to Cape St. George the course and

distance are N.N.E. $\frac{3}{4}$ E., about 12 leagues: between these two capes is the Bay of St. George, which extends inwards E.N.E., 18 leagues from the former, and E.S.E., 11 leagues from the latter. At the head of this bay, on the south side, round a low point of land, is a harbour, with anchorage in 8, 10, or 12 fathoms water. The river St. George empties itself into the head of this bay, but it is not navigable for anything but boats, and it appears to be fast filling up with sand. On the north side of the bay, before the isthmus of Port-au-Port, is good anchorage, in 7 or 8 fathoms, with northerly winds: from off this place a fishing-bank stretches two-thirds across the bay, with from 7 to 19 fathoms water on it, dark sandy bottom.

Cape St. George lies in latitude $48^{\circ} 28'$ North, and may be readily known, not only by its being the north point of the Bay of St. George, but also by the steep cliffs on the north part of it, which rise perpendicularly from the sea to a considerable height; and by *Red Island*, which lies 5 miles north-eastward of the cape, and half a mile from the shore.* This island is about $1\frac{1}{2}$ mile in length, and of a middling height; the steep cliffs around it are of a reddish colour. There is anchorage with off-shore winds under the N.E. end of the island, before a sandy cove on the main, which lies just northward of the steep cliffs, in 12 or 14 fathoms; you will there ride, covered from the S.W. winds by the island, and from the southerly and easterly winds by the main land; but there is no shelter whatever with winds from the North or N.W., although this place was formerly much resorted to by vessels in the fishing-trade.

From abreast of Red Island, distant 4 or 5 miles, to Long Point, at the entrance into the Bay of Port-au-Port, the bearing and distance are E. by N., 7 or 8 leagues; from Red Island to Guernsey Island, in the mouth of the Bay of Islands, E.N.E., nearly 16 leagues; from Red Island to Cape St. Gregory, N.E. by E. $\frac{3}{4}$ E., fully 20 leagues; and from Red Island to Point Rich, which is the north point of Ingrenachois Bay, N.E. by E., 49 leagues.

PORT-AU-PORT.—The land between Red Island and the entrance into Port-au-Port is rather low, with sandy beaches, except one remarkable high hillock, named Round Head, close to the shore, about 2 leagues to the E.N.—Eastward of Red Island; but up the country, over Port-au-Port, are high lands; and if you are 3 or 4 leagues off at sea, you cannot discern the long point of land which forms the bay. This bay is capacious, being about 5 miles broad at the entrance, and 4 leagues deep, running in to the south and south-westward, with good anchorage in most parts of it.

Long Point is the west point of the bay; it is low and rocky, and a ledge of rocks extends from it E.N.E. nearly a mile. S.E. by E. $\frac{3}{4}$ E., 4 miles from Long Point, and half a league from the east shore, lies Fox Island, which is small, but of middling height. From the north end of this island a shoal stretches out nearly 2 miles to the N.N.—Eastward, named the Fox's Tail; and, nearly in the middle of the bay, between Fox Island and the west shore, lies the Middle Ground, on one part of which, near the S.W. end, there are not above 3 or 4 feet water. From the head of the bay, projecting out into the middle of it, is a low point, named Middle Point, off which, extending 2 miles N.E. by N., is a shoal spit, part of which dries at low water; this Middle Point divides the bay into two parts, named East and West Bays.

From the head of the East Bay over to the Bay of St. George, the distance is above a quarter of a mile; this isthmus is very low, and has a pond in the middle of it, into which the sea frequently dashes, especially at high tides, and with gales of wind from the southward. On the east side of it is a tolerably high mountain, rising directly from the isthmus, and flat at the top: to the northward of this, and at about 5 miles distant from the isthmus, is a conspicuous valley or hollow, hereafter to be used as a mark. N.E. by E. $\frac{1}{2}$ E., above 2 leagues from Long Point, and half a league from the shore, lies Shag Island, which appears at a distance like a high rock, and is easily to be distinguished from the main; and W.N.W., about a league

* The deep passage hitherto separating Red Island from the main, has been recently closed by a bank of shingle thrown up by the sea. Vessels are, consequently, no longer able to make use of the channel when coasting along this part of Newfoundland, but must pass outside Red Island, giving it a good berth. The bank is a prolongation of that named Mulon, a pebble beach jutting out from the east side of the island, and violent storms appear to have so considerably lessened the water, that only boats can now cross it.

from it, lies the middle of Long Ledge, a narrow ledge of rocks, stretching E.N.E. and W.S.W. about 4 miles; the eastern part of them is above water, and the channel into the bay of Port-au-Port, between the west end of this ledge and the reef which stretches off from the west point of the bay, is a league wide.

In sailing in, if coming from the south-westward, advance no nearer to the Long Point of the bay than $1\frac{1}{2}$ mile, until you have brought the valley in the side of the mountain before mentioned (on the east side of the isthmus), over the east end of Fox Island, or to the eastward of it, which will then bear South a little easterly; you will then be clear of the Long Point Reef, and may haul into the bay with safety; but, if coming from the N.E. without the Long Ledge, or turning into the bay in order to keep clear of the S.W. end of Long Ledge, bring the isthmus, or the foot of the mountain (which is on the east side of the isthmus), open to the westward of Fox Island, nearly twice the breadth of the island, and it will lead you into the bay, clear of Long Ledge; and when Shag Island is brought on with the foot of the high land on the south side of Coal River, bearing then E. $\frac{3}{4}$ S., you will be within the Long Ledge. There is also a safe passage into the bay, between the Long Ledge and the main, on either side of Shag Island, though care must be taken to avoid a small shoal of $2\frac{1}{2}$ fathoms, lying W. by N., a mile from the island.

To sail up into the West Bay and Head Harbour, keep the western shore on board; this shore is bold-to. In turning between it and the Middle Ground, stand no nearer to the Middle than into 8 fathoms; but you may stand to the spit of the Middle Point into 6 or 5 fathoms. The anchorage in West Bay is in about 8 fathoms, and in Head Harbour in about 5 fathoms. The West Road lies before a high stone beach, about 2 miles south-westward of Long Point, where you may lie very secure from westerly and N.W. winds, in about 10 or 12 fathoms water; this beach is steep-to, and forms an excellent place for landing and drying fish. There is a good place at the northern end of Fox Island for the same purpose. The whole bay and the adjacent coasts abound with cod, and extensive fishing banks lie all along them.

The East Road lies between Fox Island and the east shore. To sail up to it, you should keep the high bluff head, which is about a league to the E.N.E. of the island bearing to the southward of S.E. by E. $\frac{1}{2}$ E., until the isthmus is brought to the eastward of Fox Island; you will then be within the shoal named the Fox's Tail, and may haul to the southward, and anchor anywhere between the island and the main, in from 10 to 18 fathoms.

To sail up into the East Bay, pass between the island and the east shore; and after you are above the island, come no nearer to the main than half a mile, until you are abreast of a bluff point above the island, named Road Point, just above which is the best anchorage with N.E. winds, in about 12 fathoms water. To sail up into the East Bay between the Middle Ground and the Fox's Tail, bring the said bluff point on with the S.W. point of Fox Island; this mark will lead you up in the fairway between the two shoals. Give the island a berth, and anchor as before directed, in from 8 to 12 fathoms water.

BAY OF ISLANDS.—From the Long Point at the entrance of Port-au-Port to the Bay of Islands, the bearing and distance are N.E. by E. $\frac{1}{2}$ E., 8 leagues. Be careful to avoid the Long Ledge. The land between is of considerable height, rising in craggy barren hills, directly from the shore. The Bay of Islands may be known by the many islands in the mouth of it, particularly the three named Guernsey, Tweed, and Pearl which are nearly of equal height with the land on the main. If you are bound for Lark or York Harbours, which lie on the S.W. side of the bay, and are coming from the southward, run in between Guernsey Island and the South Head, both of which are bold-to; but with southerly and S.W. winds approach not too near the South Head, lest calms and sudden gusts of wind should proceed from the high land, under which you cannot anchor with safety. There are several channels formed by the different islands, through which you may sail into or out of the bay, there being no danger but what shows itself, excepting a small ledge of rocks, which lies half a mile north-eastward from the northern Shag Rock, and in a line with the two Shag Rocks in one. If you bring the south Shag Rock open on either side of the north Shag Rock, you will go clear to the eastward or westward of the ledge. The safest passage into this bay from the northward, is between the two Shag Rocks, and then between Tweed and Pearl Islands.

From Guernsey Island to Tortoise Head, which is the north point of York Harbour,

and the S.E. point of Lark Harbour, the course and distance are nearly S. by W. $\frac{1}{2}$ W., 5 miles. *Lark Harbour* extends inwards W. by S. nearly 2 miles, and is one-third of a mile broad in the entrance, which is the narrowest part. In sailing into it with a large ship, keep the port shore on board, and anchor with a low point on the starboard side, bearing W.N.W., N.N.W., or N.N.E., and you will ride in 6 or 7 fathoms water, secure from all winds.

York Harbour lies W.S.W., nearly a league, from Tortoise Head. There is good turning room between the Head and Governor's Island, which lies before the harbour; but you must avoid a shoal running off from a low beach point on the west end of Governor's Island, named Sword Point. There is also a shoal which spits off from the next point of Governor's Island, which must also be avoided: Tortoise Head just touching Sword Point will lead clear of it. In sailing in, give Sword Point a berth; passing which, the best anchoring ground is in 10 fathoms, along a sandy beach on the main, with Tortoise Head open of Sword Point. West and north-westerly winds blow here with great violence.

Harbour Island lies at the entrance of the River Humber, and S. by E. $\frac{3}{4}$ E., 7 miles, from Guernsey Island; at its S.W. point is Wood's Harbour, a place unfit for shipping. The River Humber, at about 5 leagues within the entrance, becomes narrow, and the stream is so rapid in some places, for about 4 leagues up, to a lake, that it is with great difficulty that even a boat can stem the current. The banks of this river are well clothed with timber, and formerly a great salmon-fishery was carried on here.

The North and South Arms are both long inlets, with very deep water up to their heads. On the east side of Eagle Island, between the North and South Arms, is anchorage in 8, 10, or 12 fathoms water. Under the north side of Harbour Island also is good anchorage with S.W. winds; and opposite to the S.E. end of Harbour Island, on the south side of the bay, is Frenchman's Cove, wherein is good anchorage in from 20 to 12 fathoms.

The Bay of Islands was formerly much frequented by vessels in the cod-fishery, and stages were erected at Small Bay, which lies a little on the outside of South Head; and a large beach on Sword Point, in Governor's Island, is an excellent place for drying the fish.

From the north Shag Rock to Cape St. Gregory the course and distance are nearly N.E. 8 miles; and thence 13 or 14 miles, on a similar bearing, will carry you to the entrance of Bonne Bay. The land near the shore, from the north Shag Rock to Cape St. Gregory, is low; but a very little way inland it rises into a high mountain, terminating at the top in round hills. Along this part of the coast there are sunken rocks a quarter of a mile from the shore.

CAPE ST. GREGORY is high, and between it and Bonne Bay the land rises directly from the sea-shore to a considerable height. It is the most northerly land seen when sailing along shore between Red Island and the Bay of Islands.

BONNE BAY.—This bay may be known, at the distance of 4 or 5 leagues by the land about it; all that on the S.W. side of the bay being very high and hilly, and that on the N.E. side, and thence along the sea-coast to the northward, being low and flat; though at about one league inland, there is a range of mountains, running parallel with the sea-coast. Over the south side of the bay is a very high mountain terminating at the top in a remarkable round hill, very conspicuous when you are to the northward of the bay. This bay extends inwards S.E., nearly 2 leagues, then branches into two arms, one of which runs in to the southward, and the other to the eastward. The southern arm affords the best anchorage; small vessels should ride just above a low woody point at the entrance into this arm, on the starboard side, before a sandy beach, in 8 or 10 fathoms water, about a cable's length from the shore. There is no other anchorage in less than 30 or 40 fathoms, excepting at the head of the arm, where there are from 25 to 20 fathoms water. In sailing into the east arm, keep the starboard shore on board; and a little way round a point at the entrance will be found a small cove, with good anchorage in 17 to 20 fathoms, but you must moor to the shore.

There is a snug cove also close within the north point, with anchorage in 6 or 7 fathoms water. In sailing in or out of Bonne Bay, with W.S.W. winds, come not near the weather shore, lest you should happen to be becalmed, or should meet with heavy gusts of wind; as the depth of water is too great to admit of your anchoring.

At 10 miles to the northward of Bonne Bay is Martin Point, high and white; off which, about three-quarters of a mile, is a small ledge of rocks, whereon the sea breaks. Broom Point is low and white, and lies about a league to the northward of Martin Point; about half a mile W.S.W. from it lies a sunken rock that seldom shows itself. On the north side of Broom Point lies the Bay of St. Paul, wherein vessels may anchor with off-shore winds; but it is quite exposed to the sea.

COW HEAD lies about 3 miles to the northward of the Bay of St. Paul; this is a promontory, which has the appearance of an island, being joined to the main only by a very low and narrow neck of land. About three-quarters of a mile off this head lies Steering Island, which is low and rocky, and is the only island on the coast between the Bay of Islands and Point Rich. Cow Cove lies on the south side of Cow Head, and ships may lie there, in from 7 to 10 fathoms, sheltered from northerly and easterly winds. Shallow Bay lies on the north side of Cow Head, and has water sufficient for small vessels. At the N.E. side of the entrance is a cluster of rocky islands, extending E.N.E. and W.S.W.; and at the W.S.W. side are two sunken rocks close to each other, which generally show themselves; they lie a cable's length from the shore, and there is a channel into the bay on either side of them. Steering Island lies right before this bay, and you may pass it on either side; but come not too near its N.E. end, as there are some sunken rocks extending from it. This is considered the best situated for a fishery on all the coast, and the grounds about its environs are eminently productive.

INGRENACHOIX BAY.—Point Rich, the northern point of Ingrenachois Bay, is distant above 50 miles, N.E. $\frac{1}{4}$ E. from Steering Island; all the way between Shallow Bay and the south point of Ingrenachois Bay, the coast forms nearly a straight line without creek, cove, or shelter from seaward, though vessels may here and there anchor, with off-shore winds.

About 6 leagues from Steering Island, $\frac{1}{2}$ a mile inland, stands Portland Hill, so named from its resemblance to the Bill of Portland in the English Channel; the appearance of this hill continues the same from whatever point it is viewed.

PORT SAUNDERS AND HAWKES HARBOUR.—These are situated within, and to the eastward of Ingrenachois Bay.

Keppel Island lies at the entrance of Ingrenachois, and though at a distance it appears joined to the main land, yet there is a passage on either side of it. In sailing into Port Saunders, the island will be left on the starboard side, and when you are $\frac{1}{2}$ a mile within the entrance, anchor in 12 or 14 fathoms. Vessels proceeding to the head of the harbour must keep the port shore on board, to avoid a ledge of rocks that lies nearly in mid-channel. Port Saunders is considered the best harbour for vessels bound to the southward.

The entrance to Hawkes Harbour is to the southward of Keppel Island. The starboard shore is shoal, and has a sand-bank stretching along the land, and running out two-thirds of the passage over, a great part of which dries at low water. The course in is E.S.E., keeping nearer the island than the main, until the eastern end of the former, a low sandy beach, bears N.E. by N. or N.N.E.; then steer S.S.E. $\frac{1}{2}$ E. for a small island you will see situated farther up the harbour; keeping the port shore well on board, run direct for this island, and when you have brought the point, at the south entrance of the harbour, to bear N.N.E. $\frac{1}{2}$ N., and are at the S.S.E. point of a bay on the starboard side of the harbour, you will then be beyond the shoal ground, and may anchor in 12 fathoms water; or else run within half a mile of the small island, and anchor there, which will be more convenient for both wood and water. This is the best harbour for ships bound to the northward. The land round about these harbours is generally low and covered with wood. You may occasionally anchor outside these, in the Bay of Ingrenachois, according as you find the prevailing winds.

POINT RICH, in lat. $50^{\circ} 40' 10''$ N., is the south-western point of a peninsula, which is joined to the main by a very narrow neck of land; it is everywhere of moderate height, and projects farther to seaward than any other land on this side of Newfoundland. The coast from thence, each way, takes an inward direction.

Rounding Point Rich, on its northern side, you will meet with Port au Choix, small, but yet capable of admitting a ship of burthen, mooring head and stern; to sail in you should keep the starboard shore on board, and anchor just above a small

island lying in the middle of the harbour. In this place, and also in Boat Cove, which lies a little to the north-eastward, there are several stages and places for drying fish.

Old Port au Choix lies to the eastward of Boat Cove; it is a small but safe harbour, having at its entrance an island, named Harbour Island, and on its western side some rocks above and under water. There is also another island lying E.N.E. $\frac{1}{2}$ N., distant nearly a mile from Harbour Island, about which are several rocks, some of which stretch out towards Harbour Island, thereby rendering the passage between them very narrow. There are 4, 5, 6, and 7 fathoms water between Savage Island and the main, and 4 and 5 fathoms between Savage Island Rocks and Harbour Island, and nearly the same depth between Harbour Island and the western shore.

To sail into Old Port au Choix, on the western side of Harbour Island, you must keep the island close on board; but to go in on the eastern side of the island, give the north-eastern point of the island a berth, and having well entered, you may anchor anywhere on the port side of the harbour, only avoiding the starboard side, for a shoal of sand and mud runs all along it.

BAY OF ST. JOHN.—This is an open and extensive bay, bounded by Point Rich to the southward, and Point Ferolle to the northward, having several islands within it, and some sunken rocks. The largest of these islands is St. John's, about $2\frac{1}{2}$ miles in length, and $1\frac{1}{2}$ broad, and lies E.N.E. distant $8\frac{1}{2}$ miles from Point Rich; on its south-western side is a small harbour, well calculated for the cod-fishery, but too much exposed for shipping, as south-westerly winds commonly drive in a heavy sea. On the south-eastern, or inner side of the island, and between it and One Head Island, vessels may lie much more secure, in 14 or 16 fathoms water, and sheltered from most winds; and this is considered to be the only safe anchorage in the whole bay. West from St. John's Island, a large mile, is Flat Island, having a rock above water at its southern end. The channel between St. John's and Flat Island has from 13 to 25 fathoms in it, and the shores are both bold-to. The Twin Islands lie N.E. by N. from Flat Island, distant a league, and have no danger about them. To the westward of the Twins are several scattered rocks above water, named the Bay Islands; they have deep water around them, but no anchorage. At the bottom of the bay the land is very high, and there is the little river of Castors, the entrance to which is dangerous and shallow, therefore seldom frequented. From the northern point of this bay a rocky shoal extends all the way to Point Ferolle, stretching out 3 miles from the shore.

POINT FEROLLE lies N.E. by E. $\frac{1}{4}$ E. from Point Rich, distant 22 miles; it is of moderate height, and joined to the main by a narrow neck of land, which divides the Bay of St. John's from New Ferolle Bay, making it appear like an island, when seen from a distance. Its northern shore is bold-to; and this part of the coast will easily be known by the adjacent table land of St. John's, the west end of which mountain lies from the middle of Ferolle Point S. by W., and its eastern end S.E. $\frac{3}{4}$ S.

New Ferolle Bay is a small cove lying to the eastward of the point, and is quite flat all over, there being not more than 2 and 3 fathoms at any part. It is quite open to the northerly winds, and has a stage on each side of it, with plenty of room for others.

ST. MARGARET'S BAY is large, and has several islands within it, also various inlets or coves, affording good anchorage, particularly on its western side, which is the best situation for ships, being most clear of danger, and convenient for wooding and watering. On its banks are spruce and fir trees in plenty, and many rivulets of fresh water. Dog Island, which is only an island at high water, is to the eastward of Point Ferolle fully 3 miles; being higher than any land near it, it has the appearance, when seen from the eastward, of an island situated at some distance from the main.

OLD FEROLLE.—Ferolle Island lies about 5 miles to the eastward of Dog Island. This island lies parallel to the shore, and forms the harbour of Old Ferolle, which is very good and safe: the best entrance to it is at the S.W. end of the island, passing to the southward of a small island in the entrance, which is bold-to. As soon as you are within it, haul up E.N.E., and anchor under the S.W. end of Ferolle Island, in 8 or 9 fathoms, good ground, quite land-locked. There is also good anchorage anywhere along the inside of the island, and a good channel up to the N.E. end

thereof. There are some little islands lying at the N.E. end of Ferolle Island: and on the outside are some ledges of rocks, a small distance off.

BAY OF ST. GENEVIEVE.—From the north end of Ferolle Island to St. Genevieve Head the course is E.N.E. $4\frac{1}{2}$ miles; and thence to the west end of Currant Island it is north-eastward, about 3 miles. There are several small islands lying in and before this bay, only two of which are of any considerable extent. The before-mentioned Currant Island is the northernmost of the two, and the largest: it is of a moderate height, and when you are to the E.N.E. of it, the western point will appear bluff, but not high: and when you are to the westward of it, it appears flat and white. The other, named Gooseberry Island, lies nearly a mile to the southward of it, and its west point bears from the west point of Currant Island S.S.W. $\frac{1}{2}$ W. nearly a mile. Gooseberry Island has a cross on its S.W. end, from which point a ledge of rocks stretches out nearly half a mile to the southward; there is also a shoal about half a mile to the W.S.W. from the S.W. point of Currant Island. The best channel into this bay is to the southward of these islands, between the rocks which stretch off them and a small island lying S.S.W. from them near to the south shore. In this channel, which is very narrow, there are not less than 5 fathoms at low water; and the course in is E. by S. southerly, until you come the length of the before-mentioned island: passing which you should haul to the southward, and bring St. Genevieve Head between the small island and the main, in order to avoid the Middle Bank. You may either anchor behind the small island, in 5 or 6 fathoms water, or proceed farther, with the said mark on, until the S.W. arm is open, and anchor in the middle of the bay, in 7 or 8 fathoms water. Wood and water may be procured here. There is tolerably good anchoring in most parts of the bay; but the snuggest place is the S.W. arm; the entrance to it is narrow, and has only 4 fathoms at low water: In coming into the bay, if you get out of the channel on either side, you will shoalen your water immediately to 3 or 2 fathoms.

BAY OF ST. BARBE.—From the west end of Currant Island to St. Barbe Point the bearing is E. by N., $2\frac{1}{2}$ miles; and from St. Barbe Point to Anchor Point it is N.N.E., nearly $1\frac{1}{2}$ mile. Between them lies the Bay of St. Barbe, which runs in S. by E. about 2 miles from Anchor Point. To sail in give anchor Point, and all the east side of the bay, a good berth, to avoid the sunken rocks which lie along that shore; you must be well in before you can discover the entrance into the harbour, which is very narrow; then steer South, keeping the middle the channel, and anchor as soon as you are within the two points, in a small cove, on the west side, in 5 fathoms water, on sand and mud, quite land-locked. Near this place branch out two arms, or rivers, one named the South, and the other the East; the latter has 3 fathoms a good way up, but the former is shoal. Between the S.W. point of the bay and the west point of the harbour is a cove, wherein are sunken rocks, which lie a little without the line of the two points. In the open bay are 7, 8, or 9 fathoms; but the N.W. winds cause a heavy sea to fall in here, which renders it unsafe.

From Anchor Point to the extremity of the Seal Islands, the course is E. by N. $\frac{3}{4}$ N., a league. Off Anchor Point a ledge stretches westward about $\frac{1}{2}$ a mile. There are no other dangers between it and the Seal Islands but what lie very near the shore. The Seal Islands are white and rocky, and must be approached with care on their north and western sides, because there are some sunken rocks near them.

From the N.W. Seal Rock to the N.W. extremity of Flower Ledge, it is N.E. by N. $1\frac{1}{2}$ mile; part of this ledge appears at low water, and there are 10 fathoms close off its outside.

From the north part of Flower Ledge to Grenville Ledge, the bearing is E. by S. $\frac{1}{2}$ S. about 1 mile. Grenville Ledge lies about two-thirds of a mile W. by N. from the eastern point of Mistaken Cove, between which and Seal Islands lie also Nameless Cove and Flower Cove, neither of them being fit for ships.

SAVAGE COVE.—Close to the eastward of Mistaken Cove is Savage Cove, which has a little island in its entrance, and is only fit for small vessels and boats. Sandy Bay lies 2 miles eastward from Savage Cove; here small vessels may ride in 3 or 4 fathoms water, with the wind from East to S.W.

About E.N.E. 5 large miles from Sandy Bay, is Green Island; between them, at 3 miles distant, W. $\frac{1}{2}$ S. from Green Island, is the north extremity of Double Ledge, which extends nearly two-thirds of a mile from the shore, and has only 8 or 9 feet water on it. Green Island lies about three-quarters of a mile from the main, is two-

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thirds of a mile in length, very low and narrow, and agreeable in colour to the name it bears; from the east end of it a ledge of rocks extends three-fourths of a mile to the eastward, on which the sea breaks in bad weather. There are 4 or 5 fathoms water in the channel between the island and the main, where ships may anchor, if necessary. To go in from the westward, keep the island close on board for the deepest water, which is 4 fathoms; and going in from the eastward, keep the main on board. From this island to the opposite part of the Coast of Labrador, named Castles or Red Cliffs, the bearing and distance is about N.N.W. and S.S.E. $3\frac{1}{2}$ leagues. Hereabouts is the narrowest part of the Straits of Belle Isle.

From Green Island to Boat's Head the bearing is E. $\frac{1}{4}$ N. 8 leagues; between there is no shelter on the coast, but to the south-eastward of Boat's Head is a Cove, named Boat Harbour, where small vessels and boats may lie very secure, except with N.E. winds.

Cape Norman lies East $4\frac{1}{2}$ miles from Boat's Head, and is the northernmost point of land in Newfoundland, as already stated on page 43.

STRAIT OF BELLE ISLE, &c.—In crossing the Strait of Belle Isle from Quirron to Chateau Bay, your soundings will be irregular, from 20 to 30, and in some places from 30 to 38 fathoms. In the stream, or middle of the strait, you will find 25 and 35 fathoms, coarse sand and broken shells, and towards Chateau Bay 45 to 80 fathoms; within a mile of the Labrador Coast are 35, 30, and 25 fathoms. To the northward, between Belle Isle and St. Peter's Bay, there are 59, 86, 90, 96, 65, and 30 fathoms.

Captain Bayfield says:—"The soundings in the strait are so irregular that they afford very little assistance to a vessel at night, or during the fogs which so frequently prevail. In general the deepest water is on the Labrador side, as, for instance, from York Point to Red Bay, where, however, it is interrupted by the shallow water off Wreck Bay. It is also very deep on that side, from Black Bay to Forteau Bay inclusive: but the line of deep water is not direct, nor, I believe, continuous through the strait, and it is still more perplexing, that there is as deep water within 2 miles of the dangerous Flower Ledge on the Newfoundland side, opposite Forteau Bay, as in any part of the strait. The depth of water varies in different parts from between 60 and 70 to 20 fathoms, and the nature of the bottom is as various as the depths, being sometimes of rock, and at others of sand, broken shells, pieces of coral, or gravel. Fogs occur with all southerly and easterly winds, and they are frequent likewise with the S.W. wind; it is only when the wind is from between the north and west, that clear weather can be safely reckoned on.

Near the shores on either side there is usually a regular alternation of flood and ebb in fine weather, but it is not constant. The flood comes from the northward along the coast of Labrador, and also from the S.E., from Cape Bauld to Cape Norman. The latter stream, I have reason to believe, is often turned off to the northward by Cape Norman, and the same thing takes place at Green Island, on the Newfoundland side towards Greenly or Greenlet Island, on the opposite side of the strait. There is, moreover, at times, a stream running from the S.W. for several days together, along the west coast of Newfoundland. This stream occasionally sets from Point Ferolle obliquely across the strait towards Forteau Bay. Sometimes, and especially with N.E. winds, the current runs directly in an opposite direction along the west coast of Newfoundland, from Point Ferolle past Point Rich. In short, there is no constancy either in the rate or set of these streams, for the winds and the irregular tides modify the set and rate of the equally irregular currents in a manner which it is extremely difficult, if not impossible, to calculate upon with any degree of certainty. The prevalent current from the northward comes from between Belle Isle and the coast of Labrador. It is often at the temperature of the *freezing point*, bringing many icebergs into the strait, and frequently carrying them through it many miles up the Gulf. Some of these bergs ground in deep water, whilst others are continually changing their position. They are much more numerous in some seasons than in others, as I have seen 200 bergs and large pieces of ice in the strait in the month of August in one year, whilst there were not above half-a-dozen to be seen in the same month of the following season.

I have observed this current from the northward and eastward assisted by the N.E. wind, running 2 miles an hour, whilst at other times it was almost insensible. It is even reported that there is sometimes a current in the opposite direction, and I

believe that this report of the fishermen is correct, especially during the ebb tide and when S.W. winds prevail in the Gulf. At the same time that this current is running to the westward, there is at times a stream of warmer water running out to the eastward on the Newfoundland side, especially during the ebb tide.

Navigation of the Strait at Night.—From these remarks it will plainly appear that the navigation of the strait is attended with very great danger in dark or foggy nights, during which no vessel should attempt to run through; for I have found that, with all our experience, we could not be sure of the vessel's position within 10 miles under such circumstances. On the approach of a dark or foggy night, therefore, it would be prudent to anchor in some one of the bays in the north side of the strait, rather than continue under way. A vessel bound in to the Gulf, and running with an easterly wind, will, however, find no place fit for that purpose until she arrives at Black Bay, and that is not a very good anchorage, for Red Bay cannot be entered by a large vessel with an easterly wind. Loup Bay is the first good anchorage under such circumstances, and there the vessel would be so far advanced in her run through the strait that it would not be worth while to stop, since she might easily clear everything in the remaining short distance. But with a S.W. wind, at the approach of night, and appearance of a fog, a vessel bound out through the strait to the eastward had better stand off and on under easy sail, tacking by her deep-sea lead from the Newfoundland side till morning, if she be not farther to the eastward than Point Ferolle. If she be farther advanced, she had better endeavour to make Forteau Bay before dark, and anchor there for the night. In light winds or calms, during dark nights or foggy weather, it is better to bring up with a stream anchor anywhere in the strait than to drive about with the tides, without knowing whither, but then a look-out must be kept for drifting icebergs." (See pages 6 and 7.)

PART II.

COAST OF LABRADOR.

YORK POINT TO SANDWICH BAY.

YORK POINT in long. $55^{\circ} 52\frac{1}{4}'$ W. forms the west point of Chateau Bay; it is quite bold, and so is Chateau Point to the eastward, but has shoal water 50 fathoms off it to the S.E. To the N.W. of the former point is a ridge of high land named the High Beacon, estimated to be 959 feet above the sea at high water. York Point may be considered to be the north point of the eastern entrance to the Strait of Belle Isle.

CHATEAU or YORK BAY lies about 19 miles N.W. $\frac{1}{3}$ N. from the south-western part of Belle Isle, and 27 miles N. $\frac{1}{3}$ W. from Quirpon Harbour, and may be easily recognised by its position with reference to the remarkable Table Head and the St. Peter Islands; by the high land in its rear; and by there being a straight and unbroken coast, free from islands to the westward of it, but more especially by the two wall-sided and flat-topped hills, 200 feet high, situated upon Castle and Henley Islands, which lie at its entrance. Within the bay are Henley, Antelope, and Pitt's Harbours, the two last of which are perfectly secure and fit for the largest vessels. The principal entrance to Chateau Bay is between Chateau and York Points, the latter bearing from the former W.N.W. $\frac{3}{4}$ W. $1\frac{3}{4}$ mile. Within this entrance, at the distance of $1\frac{1}{4}$ mile to the northward, is Whale Island in the entrance of Temple Bay. Temple Bay has deep water, but no good anchorage, although small fishing-vessels occasionally moor on the west side, just within Temple Pass (the south entrance to the bay), where, as also on the north-western side of Whale Island, there are huts and stages of the fishermen. On the north side of Whale Island is Whale Gut, 200 fathoms wide, with a clear navigable channel of 100 yards with a depth of 4 fathoms. Exactly half-way between York Point and Temple Pass there is a small ledge of 3 fathoms water.

Henley Harbour, formed by Stag Island, is fit only for small vessels, although there is a depth of water of from 4 to 6 fathoms. It is a quarter of a mile long by a cable's length wide, and its only navigable entrance faces the south, in which direction are the basalt columns of Castle Island. Some swell rolls in with south-west winds.

Antelope Harbour is on the east side of the bay to the northward of Henley Island, and between the latter and Barrier Point, which, with its reef, separates it from Pitt's Harbour to the northward. The passage leading into both these harbours is between Stage and Henley Islands to the eastward, and to the westward, Whale and Flat Islands. The shoal water extends off to the westward of Stage Island 150 fathoms; and off to the eastward of the south-east extremity of Whale and Flat Islands 100 fathoms. Besides these, there are three small ledges, the first and outermost of which, with 2 fathoms on it, lies exactly in a line from the west extreme of Chateau Point to the east extreme of Whale Island; and with the south extreme of the Seal Islands seen through the narrow channel between Castle and Henley Islands, bearing E. $\frac{3}{4}$ N.; the second, with 3 fathoms on it, lies 160 fathoms from the east side of Flat Island; and the third, with only 9 feet, lies between the east extreme of Whale Island and Black Point, the north-west point of Henley Island. Off Black Point is the Black Rock, small and low, but always above water.

Pitt's Harbour is very superior to Antelope Harbour, being sufficiently roomy to accommodate a large fleet, and well sheltered from all winds. It is a mile long by three-quarters of a mile broad, and has a depth of 18 fathoms in the centre, decreasing gradually to 4 fathoms close to the shore on either side; the bottom is of mud.

To enter Antelope and Pitt's Harbours, bring York and Chateau Points in one, N.N.E. $\frac{1}{2}$ E., and run in on this course, which leaves the first ledge 50 fathoms to the right, till you arrive between Flat and Stage Islands, leaving the second ledge on the left; haul a little to the northward, and pass close to the westward of the Black Rock, and rounding it to the eastward, you enter Antelope Harbour. To enter Pitt's Harbour, as soon as Black Rock bears East, change your course to N.W. by N., or keep the south-west extremity of the basaltic columns of Henley Island open to the westward of Black Point, and you will clear the Barrier Reef, leaving it to the eastward. Continue to run on this course or leading mark until the east extremity of Whale Island and the west extremity of Chateau Point, on Castle Island, come in one, bearing S. $\frac{3}{4}$ W. Then change your course to N. $\frac{3}{4}$ E., or, so as to run up the harbour with the last-named marks on, and you will clear the shoal water extending 50 or 60 fathoms off Pitt's Point, and may anchor where you please.

About a mile to the eastward of Henley Island is Seal Island, and about $1\frac{1}{2}$ mile further is Duck Island; the space between is named Bad Bay, a place, as its name imports, of no anchorage. It is open to easterly winds, and in it there are rocks both above and under water.

The St. Peter Islands are a cluster of barren islets, with many rocks above and under water scattered about them, lying about S.W. $\frac{1}{2}$ W. 3 miles from Table Head. The easternmost of the group are called the Peterel Islands, because those birds breed on them. Within these islands, in the main is St. Peter's Bay, affording indifferent anchorage, although useful in cases of necessity. It is completely open to the S.E. Nearly 200 fathoms to the westward of the innermost islet is a 2-fathom shoal, and a reef extends off Point Peter, the south point of the bay, 160 fathoms towards the south-east. The anchorage is three-quarters of a mile from the head of the bay in 13 to 20 fathoms, sandy bottom. Wood and water may be obtained.

Table Head, to the N.W. of the Peterel Islands, is very remarkable, being an isolated mass of basaltic columns upon sandstone (flat at top, and precipitous all round), the summit of which is 200 feet above the sea. To the eastward of it is Truck Island; to the N.E. of Truck Island is White Mica Cove, fit only for boats.

Camp Bay is sheltered towards the N.E. by the Inner and Outer Camp Islands. In the bay are three small islets, and a rock, awash, 162 fathoms to the south-eastward of the outermost. The Inner Camp Island, about 300 feet high, and three-quarters of a mile in diameter, is separated from the south point of Niger Sound by a boat-channel in which are fishing stages and huts. The Outer Camp Islands, $1\frac{1}{4}$ mile

long, are not quite so high, and are also of bare granite; they are separated from the former by a channel 200 fathoms wide, and clear of danger. On the west side of the islands is a small cove used by the fishermen, who moor to the rocks, but are unprotected from the south-west winds.

NIGER SOUND is to the north of the Camp Islands, between them and Cape St. Charles. It is about $1\frac{1}{2}$ mile wide, runs up about 6 miles, and contains several places of good shelter. About $2\frac{1}{2}$ miles within the entrance is Niger Island, about $1\frac{1}{4}$ mile in extent, and to the southward of this is Smooth Island, much smaller and lower. The channel between these islands is unsafe, but you may pass north and south of them without danger. Good anchorage is to be found in Horn Bay at the head of the Sound, and also in Islet Bay, north of Niger Island.

ST. CHARLES HARBOUR.—Cape St. Charles, on the north side of which is the harbour, may be readily known by the round hill of the same name, 654 feet high, bearing N.W. by W. 850 fathoms from the cape, and which is the highest land on this part of the coast. The harbour may also be known by St. Charles Island, situated a long mile off the cape to the S.E. by E., which is high and about half a mile in length, with several large rocks close off its inner side; outside of it is Low Island, to the south-west of which about one mile, is the situation of a reported danger. Between these islands and the cape is a clear navigable channel.

The harbour is formed by three islands, which lie along the east side of the cape. The space in which vessels anchor is about 600 fathoms long by 280 fathoms wide; and the depth is from 5 to 12 fathoms on mud. South-east winds bring in some sea, on which account it is not considered a very secure harbour for large vessels, excepting in the finest months of summer. The south-easternmost island protecting the harbour is Fishflake, between which and the main small vessels may be perfectly secure in 9 to 10 feet water, by making fast to the rocks, but this channel cannot be made use of as an approach to the harbour, being too shallow to be serviceable. Blackhill, which is high, black, and precipitous, is the next island, and Spare Island is the innermost. The channel out of the harbour to the N.W. of Spare Island, is intricate, and only fit for boats. The entrance into the harbour is between Fishflake and Blackhill Islands, and is quite clear. The S.E. extreme of Fishflake Island appears like the extremity of Cape Charles, and bears E. by S. $1\frac{1}{2}$ mile from St. Charles Hill. When running for the harbour, steer for the north-east side of Fishflake Island, so as to pass its south-east extremity at the distance of about 150 fathoms, steering N.W. by W., and that course will take you through the entrance between Fishflake and Blackhill Islands, into the harbour, clear of all danger. There are three small rocks above water off the N.W. point of Fishflake, but they are bold-to, as are also the shores on either side.*

St. Charles Channel is between the main and Caribou, Size, and Muddle Islands; it contains deep water, with no detached shoals. The course up the centre of this fine channel to the Narrows, is N.W. $\frac{1}{2}$ N. $3\frac{1}{4}$ miles. A run of half a mile North, through the Narrows, leads into the channel, between Muddle Island and the main, which is deep, and free from all dangers. The course through this channel to the mouth of St. Charles River is N.N.W. $1\frac{1}{2}$ mile; and a vessel may either run up that bay to the westward, or through Muddle Channel eastward, into St. Lewis Sound. St. Charles River runs East, and is nearly a mile broad, but about 2 miles up it becomes narrow and intricate. Wood and water may be had in abundance up this inlet.

ST. LEWIS SOUND.—The north point of St. Lewis Sound is Cape St. Lewis, in lat. $52^{\circ} 21' 24''$ N., and long. $55^{\circ} 38' 23''$ W.; it is composed of precipitous, dark red granite hills. At its southern extremity is a small rocky peninsula, and nearly a mile to the eastward of this is St. Lewis Rock, close to the shore.

The Sound is about 4 miles wide at its entrance, between Cape St. Lewis and North Battle Island, the bearing between which is S. by W. $\frac{1}{2}$ W. It is about 8 miles long in a N.W. by W. direction, from its entrance to Telegraph Point at St. Lewis Inlet. The shores are for the most part quite bold, and the water is everywhere extremely deep, often exceeding 50 or 60 fathoms. Nearly in the centre of the Sound are the Middle Rocks, and farther in the River Islands. In the fall of the year, a heavy ground swell called the undertow, sometimes rolls into the Sound from the eastward,

* St. Charles and Battle Harbours are the principal fishing stations on this coast.

as far as the entrance of the Inlet, which comes in tremendous waves, often without wind, and bursting over islets 30 feet high, proceeds with irresistible force against the sides of the precipices. It is, however, not so dangerous to boats as the short breaking sea of the Gulf, and it discovers shoals, as everything with less than 4 fathoms on it is sure to break.

On the north side of the Sound there is a small cove, named *Fox Harbour*, at $1\frac{3}{4}$ mile N.W. from Cape St. Lewis, which affords secure anchorage in 5 to 8 fathoms, muddy bottom. The east point of the harbour is low, with several fishermen's houses on it, and has a small rock to the northward, joined to it by shoal water, which must be left about 50 or 60 fathoms on your right, to avoid a reef, partly above water, which runs off the south-west extremity of the point separating the harbour from the unsheltered bay to the westward, and forming the north side of the entrance. Anchor about 300 fathoms within the entrance. Water may be procured, but wood is scarce.

Deer Harbour to the westward of Fox Harbour, is protected from southerly winds by Marnham Island at the entrance, which breaks the fairway into two channels. The principal passage in is to the westward of the island, and has 19 to 31 fathoms, and bold-to to the rocks on either side; the other channel is only fit for boats. There are no dangers which cannot be seen, and the harbour will accommodate any number of vessels, which can beat in or out with facility.

Open Bay to the south-west of Deer Harbour, affords good anchorage near its head, but exposed to the S.E. The water, like that of Deer Harbour, is deep.

ST. LEWIS INLET.—The south point of Open Bay has off it some rocks above water, named the Black Reef, between which and the River Islands is the entrance to St. Lewis Inlet, of nearly a mile in width. The depth is generally above 30 fathoms, so that there is no good anchorage until at Black Fly Island, 9 miles from the entrance, under the west side of which there is good riding in 5 to 9 fathoms, on a bottom of mud and stones; here wood and water may be readily obtained. Above this the navigation is intricate, but it is possible to take a vessel not drawing more than 18 feet $5\frac{1}{2}$ miles farther up. Above Black Fly Island is Wood Island, about a mile in length. When running for the Inlet, steer N.N.W. $\frac{1}{4}$ W. $2\frac{2}{3}$ miles from the North Battle Island to the North Middle Rocks (two bare rocks close together, and about 40 feet high), and having given them a berth of two or more cables on your left, steer N.N.W. $\frac{1}{4}$ W. for 2 miles or more, when the two Seal Islands (small and bare, with shoal water a short distance off their east ends) will be about 400 fathoms on your left. Change your course now to N.W. by W. $\frac{1}{4}$ W., and run in through the channel to the northward of the River Islands, which is three-quarters of a mile wide, and clear, except two small islands which must be passed to the southward at the distance of a cable.

The River Islands, forming the south side of the entrance of St. Lewis Inlet, consist of Kalmia, Pocklington, and the Seal Islands. The former two are of bare granite, about 150 feet high. Off the east side of Pocklington Island are several small islets, the easternmost of which are the Seal Islands; and there is also a small sunken rock off the south-east end of the same island, at the distance of a quarter of a mile, upon which the sea usually breaks. Between these islands and the main, to the westward, it is possible to anchor, though the depth is great, exceeding 30 fathoms, with a muddy bottom.

Within the River Islands, in the main, is Fall Harbour, a little place fit only for small vessels, with inferior riding and exposed to the easterly swell; the depth is three fathoms. To the eastward of this is Cutter Bay, fit only for small vessels on account of an inadequate depth of water, and some rocks lying in it. Isthmus Bay is too much exposed to be of much service; hence the coast runs to the north-eastward 2 miles to Cape Club, off which a reef extends 70 fathoms to the eastward. At $1\frac{1}{4}$ mile S.E. $\frac{1}{2}$ E. from the cape are the South Middle Rocks, above the water, but it is not advisable to approach them nearer than 2 cables' lengths, unless in fine weather when shoals can be seen.

On the south side of St. Lewis Sound are Battle, Caribou, Muddle, Size, and Surf Islands, among, and within which, are some good harbours. *Muddle Harbour* is a snug little harbour perfectly land-locked, with 4 to 10 fathoms, between Surf Island, Size Island, and Muddle Island; to enter it from St. Lewis Sound, steer W.N.W. $\frac{1}{2}$ W. 2 miles, to Surf Cape, the north-west extreme of Great Caribou Island, which may

be kept close to, and steer from it S.W. by W. one mile, to the narrows of Caribou Channel, between the south-east end of Surf Island, and the west end of Great Caribou; then proceed for 600 fathoms towards the north-west between Surf and Size Islands, keeping at first nearer to the former than the latter, and afterwards in mid-channel; then haul in to westward, and anchor where you please. The Battle Islands are at the south side of the entrance of St. Lewis Sound, and the south-east island is the eastern extremity of the coast of Labrador. The Ribb Reefs are about half a mile apart, and bear north and south from each other; the north reef bears East $1\frac{1}{2}$ mile from North Battle Island; the sea always breaks on them, and vessels ought to pass outside of them. West of these is Great Caribou Island, which is 9 miles in circumference; its south-east side is broken into coves open to seaward, and there are several islets and rocks along it, and one sunken, the Foam Rock, which is the only danger between Battle Islands and the Great Caribou.

Battle Harbour is between the Battle Islands and the east end of Great Caribou. It is only fit for small vessels, being about 30 fathoms wide in the entrance, 70 or 80 fathoms wide within, and half a mile long. It is generally crowded with the vessels and boats of the fishermen, which moor to the rocks on either side, and the shores are covered with their houses and stages. There is a good house and store on Signal Island, with a high flagstaff which may be readily seen at sea, and from which the island derives its name. The south entrance is only fit for boats; vessels must therefore approach from the northward, passing to the west of the North Battle, and the islands lying between it and Signal Island. There are two small round islets, the southernmost in the entrance of the harbour; these may be passed close on either side. This harbour is secure during the summer months, but is unsafe in the fall of the year, from the heavy ground swell before mentioned.

ST. LEWIS CAPE has been previously mentioned. Just round the cape is the entrance of a small cove, named Deepwater Sound, which runs in S.W. $\frac{1}{2}$ W. for half a mile, and is very narrow, but has from 20 to 40 fathoms within it.

PETTY HARBOUR.—From the northern part of Cape St. Lewis to the south head of Petty Harbour Bay, the course is about N.N.E. $\frac{3}{4}$ E., distant $1\frac{1}{2}$ mile; the shores are bold and lofty. The entrance is $1\frac{1}{2}$ mile wide; and the north point bears from the southern point N.E. by N. The bay runs up nearly N.W. by N., fully a mile, having from 20 to 40 fathoms water in it. At the bottom of the bay is the harbour, the entrance to which is to the northward of a low point of land, shutting the harbour in from the sea, so as to make some difficulty in distinguishing its situation; it is not above 50 fathoms broad at the entrance, with 5 fathoms mid-channel, and 3 towards the sides; but this narrow passage continues only a short way. Having passed through the passage the harbour opens wide, and vessels will have plenty of room, and may anchor in any part, in from 7 to 12 fathoms, land-locked.

From the north head of Petty Harbour Bay to Point Spear, the course is N.E. $\frac{1}{2}$ N., distant $2\frac{1}{4}$ miles; and from Cape Lewis to Cape Spear, in nearly the same direction, 6 miles; between the former points are Barren Bay and Spear Harbour. Barren Bay is a little to the northward of the northern part of Petty Harbour Bay, and affords no shelter; but *Spear Harbour*, which lies to the southward of Point Spear, is a very excellent harbour. In coming from the northward, and making Point Spear, you will open two islands, in the bottom of a small bay, between which is the best passage into Spear Harbour. Keep the northern island close on board, there being 4 fathoms alongside it; and after you are about a cable's length within the islands, steer for the middle of the harbour, and anchor in 7 or 8 fathoms: there is good room to moor. Small vessels may go on either side of the islands, the least water being 2 fathoms; but it should be observed that in coming from the southward, you will only be able to distinguish one island, for the other will be shut in with the land, so as not to be seen until you get within the heads.

SOPHIA, CHARLOTTE, AND MECKLENBURGH HARBOURS.—From Point Spear to the entrance of these three harbours the course is N.W. by N., about 3 miles, passing several small but high islands lying within half a mile of the shore; these are commonly named the Spear Islands, and are bold-to, with channels between them of 20 fathoms water. N.E. by E. $\frac{1}{4}$ E. from the southern head of the entrance to the

three harbours, lie two small islands, close together, and therefore named the Double Island, which appear to be as high as they are broad. About a cable's length to the eastward of them are two sunken rocks, over which the sea, in bad weather, constantly breaks. Nearly in the middle of the entrance, also, are two islands so close to each other as to seem but one; these are steep-to, and ships may pass on either side of them, in 12, 13, and 14 fathoms, anchoring within them, in Queen's Road, in 16 fathoms; but to the southward of these islands you will find the widest passage, and most room for ships to work out.

The first and southernmost of these three harbours is Sophia Harbour, running in S.S.W., about $1\frac{1}{2}$ mile, with from 10 to 15 fathoms water; it then trends away, round a low point to the eastward, and becomes much broader; it is thence shoal water, and only fit for small vessels.

Port Charlotte is the middle harbour, and fit for any ship; there is a low flat island on the starboard side of its entrance, from which a reef of rocks extends one-third of the channel over, to avoid which you must keep the southern side on board: you will then have 9 fathoms close to the shore, until you get a quarter of a mile within the harbour, when you may anchor in any part, in from 12 to 17 fathoms, only giving the starboard side a berth, to avoid a reef that lies on that side.

Mecklenburgh Harbour, the northernmost of the three harbours, runs in N.N.W. $\frac{1}{2}$ N. and N.W. by N. about 2 miles; in the lower part of it there are 20 fathoms, but as you advance the water lessens, so that in the upper part there are no more than 12 fathoms for ships to moor in. To sail up to the head of the bay, you must keep nearer the port side, in order to avoid the ledge of rocks lying on the starboard, about 30 fathoms from the shore. These rocks lie within the narrowest part of the harbour, and above the low point on the starboard side. The best anchorage is at the head of the harbour.

ST. FRANCIS HARBOUR.—From Point Spear to Cape Francis the course and distance are nearly North, 6 miles, and from the islands at the entrance of the three harbours, just mentioned, to Cape St. Francis, N.E. $\frac{3}{4}$ N., about 5 miles; nearly half a mile to the westward of the cape is St. Francis Harbour, a snug and secure harbour, though small, and generally filled with vessels during the fishing season, considerable fisheries being carried on in its vicinity. There are two entrances to this harbour, one being to the northward, the other to the south-westward of Pigeon Island, which lies directly before its entrance; the south-eastern channel leads to a small but narrow inlet, named Round Harbour; everywhere there is clean ground, with 10 fathoms in the channel as you enter, and the depth gradually decreases as you advance towards its head, where you have 5 and 3 fathoms. In entering to the south-westward for St. Francis Harbour, you should beware of, and give a berth to, the western side of Pigeon Island, for a rocky reef runs off it; proceed on N.N.E. $\frac{1}{2}$ N., and having got fairly between the two points of the harbour, you will perceive on your starboard side a small white rock, to which go not nearer than 7 fathoms; steer up North, and having passed midchannel, or rather nearer the starboard shore, the rocks above water, which you will see on each side of you, turn westerly, and anchor in 4 or 5 fathoms. Small vessels go to Birnell's Beach, or up to the cove at the northern extremity of the harbour. Merchantman Harbour is about 2 miles W. $\frac{1}{2}$ S. from St. Francis Island; it is small, but has from 7 to 15 fathoms water.

Cape St. Francis is the eastern point of an island, between which and Granby Island is a very narrow passage for boats, with 4 fathoms water within it. From this cape, in a N.N.-Westerly direction, about three-quarters of a mile, is Indian Point, which has between it and Jasper Islands south-eastern point an opening leading into Indian Bight and Shoal Tickle, two narrow coves, the latter of which is shallow, and with only 2 and $1\frac{1}{2}$ fathoms water in it. To the northward of Indian Point are Hare and Fox Islands, with a narrow passage between them running northward. On crossing from Indian Bight to the channel, you will have deep water, but when you enter the passage it will shallow to 5, 4, 3, and 2 fathoms; this flat will continue for a quarter of a mile; you then deepen your water again to 5, 7, 10, and 12 fathoms. Vessels frequently anchor in this place on the western side of Hare Island, or rounding the northern end of Fox Island, run through Pearce's Tickle into Sealing Bight.

SEALING BIGHT is a very commodious and convenient place for the fisheries.

The best anchorage is in the northern part of the bay, to the westward of Jasper Island, where you may safely ride in 8, 10, or 11 fathoms, or farther in, with less water. There are several coves, situated along shore, to the northward of this anchorage, affording convenient anchorage for small vessels. Fresh water can easily be obtained; but wood is scarce. The southern entrance to this place is between Indian Point and Jasper Island on one side, and Hare and Fox Islands on the other; the water is deep, and there is no danger, except a reef stretching out to the south-westward from Gull Island, upon which the sea breaks very high in stormy weather; it will, therefore, to avoid this reef, be always prudent to borrow close towards Indian Point, in either sailing in or out of Sealing Bight.

FISHING SHIP HARBOUR.—From St. Francis Island to the northernmost Fishing Island, the course is N.N.E. $\frac{3}{4}$ N., and the distance 3 miles. The Fishing Islands are three in number; the two northernmost are connected by a beach, which, with the main, form Fishing Ship Harbour, where ships may lie land-locked, secure from all winds, in from 14 to 5 fathoms water. The entrance is to the southward, on either side of the southern Fishing Island.

The best passage will be between the two western islands, that entrance bearing from Hare Island N. by W. There is no danger in this channel, and vessels may sail right through it, in nearly a N. by W. direction, up to the very head of the harbour, and anchor in 12 fathoms; here there is good room for ships to moor. There are two other passages into this place, one to the westward from the entrance of Gilbert's River, the other to the northward of all the Fishing Islands; the latter has 7 fathoms throughout, but is so narrow that you will have some difficulty in discovering the opening.

GILBERT'S RIVER.—Between Fishing Islands and Granby Island to the southward is the northern entrance into Gilbert's River; the southern and widest entrance being between Denbigh Island and the main; there is also an entrance between Denbigh and Granby Islands. The passage in has deep water everywhere. The course of the river is nearly N.W. by N., for about 6 miles; it then divides into two branches, one running N.W. by N., 7 or 8 miles, the other S.W. by W., about 6 miles. Both these branches are full of rocks, small islands, and shoals: but in the middle the anchorage is good all the way up, from 20 to 10 fathoms. This river has also a passage out to sea, between Hare and the Fishing Islands.

CAPE ST. MICHAEL.—At 6 miles N.N.E. $\frac{1}{4}$ N. from the northernmost Fishing Island, and 16 miles N.N.E. $\frac{3}{4}$ N. from Spear Point, is Cape St. Michael, which is high and steep towards the sea. It lies in lat. $52^{\circ} 47' N.$, and besides being high and steep towards the sea, may be known by a large bay, named St. Michael's Bay, to the northward of it, having in it a number of large and small islands. The largest of these islands, named Square Island, lies in the mouth of the bay, and is $3\frac{1}{2}$ miles long, and very high; its north-east point is a high round hill, and makes in coming from the southward, like a separate island, being only joined by a low, narrow neck of land.

OCCASIONAL HARBOUR.—About $2\frac{1}{2}$ miles to the southward of Cape St. Michael is Occasional Harbour, which may be easily known by the Twins, two large rocks, lying $\frac{2}{3}$ of a mile outside of the entrance. They are very near to each other, and vessels may pass on either side of them; the entrance to the harbour is between two high lands, and runs in W. by N. for two miles, then N.W. by N.; both sides are steep-to, without any dangers; good anchorage may be had, in from 10 to 7 fathoms, about 2 miles from the entrance. The wind between the high land sets right into or out of the harbour.

From Cape St. Michael to Cape Bluff the course and distance are about N.N.E., $7\frac{1}{2}$ miles. These two capes form the points of entrance to St. Michael's Bay.

ST. MICHAEL'S BAY.—The best anchorage for small vessels in St. Michael's Bay, is on the south side; that is, keep Cape St. Michael's shore on board, then keep along the south side of the first island you meet with, namely, Long Island, till you are nearly as far as the west end of it, where you may anchor in from 12 to 20 fathoms, land-locked, and may work out to sea again on either side of Long Island.

From Cape St. Michael to the entrance of Square Island Harbour, the course is N.N.W. $3\frac{1}{2}$ miles; in the entrance lies a small isle of a moderate height, to the west-

ward of which is the best passage into and out of the harbour, there being only 2 fathoms water in that to the eastward of it.

About a league N.N.W. from Square Island Round Hill, lies the entrance into Dead Island Harbour, which is only fit for small vessels, and is formed by a number of islands. Between these islands and Cape Bluff there is a passage out to sea.

Cape Bluff is very high land, ragged at the top, and steep towards the sea. Cape Bluff Harbour is small, and only fit for small vessels. To sail into it, keep Cape Bluff shore on board till you come to a little island, then pass to the eastward of it and anchor.

From Cape Bluff to Barren Island the course is north-eastward, about a league; and from the south point of this island to Snug Harbour the course is N.W. by W., $1\frac{1}{4}$ mile. This is but a small harbour, but in it there is very good anchorage in 26 fathoms water, and no danger in sailing in or out.

One mile to the northward of Barren Island lies Stony Island; and within these islands, in the main, are Martin and Otter Bays, in the northernmost of which is very good anchorage and plenty of wood, and no danger but what shows itself.

DUCK HARBOUR.—On the western side of Stony Island is Duck Harbour, which is very good for small vessels. Large vessels may anchor between the west point of Stony Island and Double Island, in 20 or 24 fathoms water, and may sail out to sea again on either side of Stony Island, in safety.

HAWKE ISLAND lies a mile to the northward of Stony Island. Within Hawke Island lies Hawke Bay, which runs to the westward 2 leagues, and then branches into two arms, one running to the W. by S., 2 leagues, and the other N. by W., 5 miles; these arms are well supplied with wood. After you are within Pigeon Island there is very good anchorage up to the head of both arms.

On the south side of Hawke Island lies Eagle Cove, wherein is very good anchorage for large vessels, in 30 or 40 fathoms water. Small vessels may anchor at the head in 7 or 8 fathoms.

CAPLIN BAY.—On the main, within Hawke Island, about 5 miles to the E. by N. of Hawke Bay, lies Caplin Bay, in which is very good anchorage and plenty of wood.

PARTRIDGE BAY lies $4\frac{1}{2}$ miles to the northward of Hawke Island. In this bay there is very good anchorage, but difficult of access, unless you are acquainted, on account of a number of small islands and rocks which lie before the entrance. The land hereabout may be easily known, for the southern point of the bay is a remarkably high and barren table hill, and all the land between this hill and Cape St. Michael is high, while that to the northward of it is low.

SEAL ISLANDS.—From Cape St. Michael to the southernmost of the Seal Islands the course is N.E. $\frac{1}{2}$ N., 9 leagues; and thence to Round Hill Island it is about N.E. $11\frac{1}{2}$ miles; this latter island is the easternmost land on this part of the coast, and may be known by a remarkable high round hill on the western part of it.

From Round Hill Island to Spotted Island the course is N.N.W. $\frac{1}{2}$ N., distance $1\frac{1}{2}$ league. From Spotted Island the land trends N.N.-Westerly, and is fronted with numerous islands.

SHALLOW BAY.—From the southernmost Seal Island to White Rock, the course is N.N.E. $\frac{1}{2}$ E., about 5 miles; and from this rock the course into Shallow Bay is W. $\frac{1}{2}$ S., 4 miles. There is tolerably good anchorage in this bay, and no danger except a small rock which lies off a cove on the port hand, and about one-third of the bay over: this rock is uncovered at low water. There is very little wood on the shores of this bay.

From White Rock to Porcupine Island the course is N.N.W., distant two leagues. This island is high and barren, and you may pass on either side of it into Porcupine Bay, where you will have very good anchorage, but there is little or no wood.

SANDY BAY lies on the southern side of the Island of Ponds, and N. $\frac{1}{2}$ W. 5 miles from White Rock. In it there is very good anchorage in 10 fathoms water, on sandy bottom; but wood is exceedingly scarce, otherwise this would be a convenient place for fishing vessels. Between this bay and Spotted Island



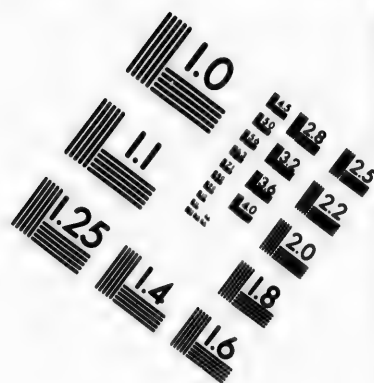
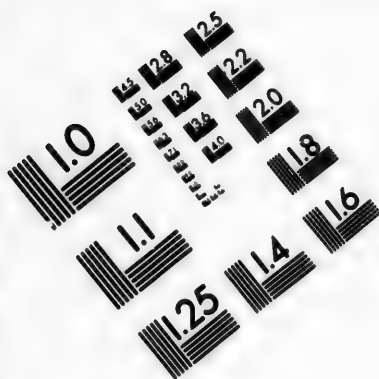
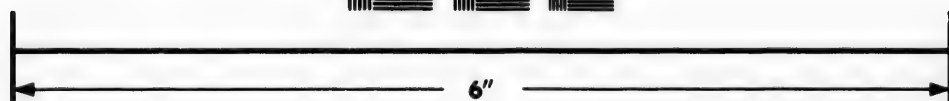
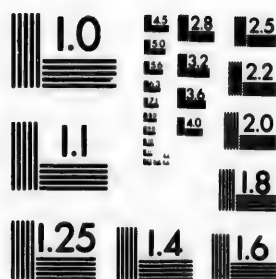


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are a great number of islands and rocks, which render this part of the coast dangerous.

SPOTTED ISLAND is high barren land, and may be known by several large white spots on its eastern side. It is about 3 miles long, and 3 miles broad, and the northern part lies in lat. $53^{\circ} 25' N.$ Within this island, to the westward, lies Rocky Bay; you may sail into this bay by passing to the northward of Spotted Island, and between either of the islands that lie before the entrance of the bay. There is no good anchorage in the bay, the ground being rocky, until you are between Level Point and Eagle Island, where you may anchor in 8 or 10 fathoms water, good bottom, taking care to give Level Point a good berth. The best anchorage is on the west side of Eagle Island, in 8 or 9 fathoms water, muddy bottom. Passing between Eagle Rocks and Duck Rocks, you may borrow on either side to within two-thirds of a cable's length, or, you may run up and anchor on the south side of Narrow Island, in Narrow Harbour, and be handy for wooding and watering.

From Spotted Island to *Wolf Rock* the course is N.N.E. $\frac{1}{2}$ N., 18 miles. This rock just appears above water, and is about 10 miles from the main. There are some sunken rocks about it, and several islands between it and the coast.

Indian Island lies 2 miles to the northward of the entrance of Rocky Bay; it is remarkably high land, the western end being highest. Between this island and the main is tolerably good shelter for small vessels, and it appears to be a good place for a seal fishery.

SAND-HILL COVE.—About 4 leagues to the westward of Indian Island lies Sand-Hill Cove (so named from several sand-hills lying on the southern side of the entrance): in this cove is tolerably good anchorage about $\frac{1}{2}$ a mile within the entrance, in 3 and 4 fathoms water, sandy bottom. In sailing into the cove take care to give the north point a good berth, there being a ledge of rocks stretching off from the point about a cable's length, and which runs to the westward along shore for about 2 cables' lengths.

TABLE BAY.—The south head of this bay lies 2 leagues to the N. by W. of Sand-Hill Cove, and may be known by a remarkable table hill on the north side of the bay, at about 8 miles within the entrance; this hill may be seen from the Wolf Rock, which lies N.W. $\frac{1}{2}$ N., $7\frac{1}{2}$ leagues from the entrance of the bay. In the bay, about 4 miles from the entrance, lies Ledge Island, so named from a ledge of rocks stretching to the westward from the island up the bay for about 2 miles. On the south side of this island is anchorage, in 12 or 14 fathoms water, in what is named South Harbour, or, you may run higher up and anchor in Table Harbour. On the north side of the bay, just within Ledge Island, lies North Harbour, in which is very good anchorage. In sailing up the bay on the northern side of Ledge Island to Table Harbour, take care to keep the main close on board, in order to avoid a rock lying nearly half-way between the north-western extremity of the ledge off Ledge Island and the main.

THE GANNET ISLANDS are a cluster of islands lying from about 7 to 11 miles from the main; the outer one bears N.N.W. $\frac{1}{4}$ W., 10 leagues from the Wolf Rock.

CURLEW HARBOUR lies nearly S.W. of Gannet Islands, and may be known by a round green island lying before its entrance. The channel into the harbour is between this island and a low point of the main to the southward of it, having a small rock above water, close to the point: there is no danger in sailing into this harbour. The best anchorage for large vessels is about a mile within the entrance, bringing the small rock off the point of the entrance on with the northern point of Long Island (which lies about half a league to the N. by W. of Green Island); they will then lie in 14 or 15 fathoms water, good bottom. Small vessels may run higher up, and anchor in 10 or 7 fathoms water. On the southern side of the harbour is a shoal, lying at a small distance off shore. There is no wood to be had in this harbour, but water is plentiful.

ISTHMUS BAY.—Round the western point of Curlew Harbour lies the entrance into Isthmus Bay: in sailing into it from Curlew Harbour, you should keep Great Island on board, in order to avoid a shoal that stretches off the point towards the island. There is another passage into Isthmus Bay, between the western point and a small bare rock of a moderate height, that lies off the south point of Great Island;

this passage is narrow, and has 5 fathoms water in it. Both wood and water may be obtained here.

HARE HARBOUR.—One league to the westward lies Hare Harbour, which is only fit for small vessels, the ground being foul, until you are near the head, where you may anchor in $3\frac{1}{2}$ fathoms water, good ground. Hare Island, which lies before the entrance to the harbour, is high land. The eastern point of Huntingdon Island lies about 2 miles to the northward of Hare Island, and W.S.W. $\frac{3}{4}$ W., 13 miles from the outer Gannet Island; it is of a moderate height, and is in length, from east to west, 7 miles. About $1\frac{1}{2}$ mile off the eastern point of Huntingdon Island are Saddler and Leveret's Isles, and to the northward of the latter is a rocky flat. There is a safe passage along the south side of Huntingdon Island, leading to Huntingdon Harbour: in it you may anchor in from 15 to 5 fathoms water, but the best anchorage is in about 6 fathoms near the island; here you will lay secure from all winds, and be very handy for wooding and watering, there being plenty of both on the island.

SANDWICH BAY.—On the S.W. side of Huntingdon Island lies Earl Island, on either side of which is a passage into Sandwich Bay, which is a very fine one, being 6 or 8 miles broad and 6 leagues deep, having plenty of wood, and four fine rivers that seem to be well stored with salmon. There is very good anchorage in a cove on the east side of this bay, and on the north side under a high mountain; from the shore at the foot of the mountain and for about 5 miles to the westward, the soundings stretch off gradually from 5 to 25 fathoms, muddy bottom, and are about 3 miles from the shore. The passage into the bay, on the west side of Huntingdon and Earl Islands, has not been sufficiently sounded to be recommended, though it is by far the widest. The passage on the east side of Earl Island is narrow, and has but 3 fathoms water in it.

FROM YORK POINT TO CAPE WHITTLE.

PROCEEDING westward from York Point, along the Labrador side of the Strait of Belle Isle, the coast is straight and bold to Wreck Bay.

WRECK BAY bears W. $\frac{1}{2}$ S. $10\frac{1}{2}$ miles from York Point, and has a small river at its head, but affords no shelter. Off the east point of this bay, at the distance of $2\frac{1}{2}$ miles S. by W. lies a small patch of rocky ground, with 5 fathoms least water. On it the basaltic columns of Henley and Castle Islands are just open to the southward of York Point; and Barge Point, the next extreme to the westward, bears W. by S., distant 6 miles. The bottom can be plainly seen on this patch in fine weather; there is a heavy swell upon it in easterly gales, and frequently a great rippling; icebergs often ground upon it.

Barge Bay, $4\frac{1}{2}$ miles to the westward of Wreck Bay, affords no anchorage.

GREENISH BAY, $5\frac{1}{2}$ miles W. by N. from Barge Bay, is about 2 miles wide at the entrance but narrows within. Small vessels occasionally anchor in it; but the ground is of sand, not very good for holding, and it is open to the wind and sea from the S.E. About $1\frac{1}{2}$ mile W. by S. from the west point of the bay is Oil Islet, a small, low, and bare rock, the south extreme of which bears W. $\frac{1}{2}$ N., $6\frac{1}{2}$ miles from Barge Point. Nearly $1\frac{1}{2}$ mile to the westward of this islet, and with its south extreme and Barge Point in one, bearing E. $\frac{1}{2}$ S., lies the Sunk Ledge, a small patch of rocks awash at low water, on which the sea usually breaks. The rocks bear S.E. $\frac{1}{2}$ E., about 3-5ths of a mile from Twin Island, which stands close to the east point of Red Bay.

RED BAY is an excellent little harbour, perfectly sheltered from all winds. It is formed by Saddle Island, lying off the entrance of a bay of the main, which island has a hill at each end, about 100 feet high. To the westward of Saddle Island, at the distance of three-quarters of a mile, is West Bay, affording tolerable anchorage in westerly winds, in 10 or 12 fathoms water, over sandy bottom, but exposed to easterly winds. The outer harbour of Red Bay is between Saddle Island and Harbour Isle, at the entrance of the inner harbour, and the depth is from 6 to 9 fathoms, muddy bottom. The entrance of this harbour from the westward is about 100 fathoms wide, and the space to anchor in is 400 fathoms long, by 200 fathoms wide. There is no entrance eastward of Saddle Island, except for Loats. Immediately to the N.E.

of this anchorage is the entrance to the inner harbour, which is between Harbour Isle and the main to the eastward, and 100 fathoms wide; but shoal water on either side diminishes the deep water channel to about 50 fathoms in breadth. The depth that can be carried in is 7 fathoms. Within there is a capacious basin, nearly three-quarters of a mile in diameter, 16 or 17 fathoms deep, over muddy bottom, and where many vessels might safely winter.

Admiral Bayfield says that "Red Bay is easily entered with a leading wind, but nothing larger than a schooner of 150 tons can beat in or out. The dangers outside the harbour to be avoided are the Sunk Ledge, off the Twin Island; another small rocky shoal about 170 fathoms off the south side of Saddle Island; and a rock awash about 70 fathoms south from Peninsular Point. Running for the harbour from the eastward, the first will be avoided by keeping Greenish Point just open to the southward of the bare islet to the westward of it, till the west extreme of Saddle Island bears N.W. $\frac{1}{2}$ N. Then steer N.W. $\frac{1}{2}$ W. for the entrance of the bay between Saddle Island and the point of West Bay, taking care not to go nearer to the former than a quarter of a mile, or by the lead than 11 or 10 fathoms. As soon as the west end of Saddle Island bears N. by W., you may haul up for it, and round it to the eastward within 20 fathoms; but observe that farther in, that is off the north point of the island, there is a reef running out 70 fathoms to the northward, or towards Harbour Island. The channel between this reef and the shoal of large stones connecting Harbour Isle with the main land to the westward of it, is only 100 fathoms wide. As soon as you are through this entrance, you may choose your anchorage, only observing that there is shoal water all along the inner side of Saddle Island, and to the distance of 70 fathoms. A vessel moored here will be perfectly secure from all winds; but if you wish to go into the inner harbour, there will be no difficulty in doing so with your chart, or if you first send a boat to look at the narrow entrance.

In approaching Red Bay from the westward there is nothing in the way, excepting the rock off the Peninsular Point near West Bay, already mentioned; and which, being so close to the shore, may be easily avoided."

Carrol Cove, about $3\frac{1}{2}$ miles W. by S. from Red Bay, is very small, but affords accommodation to a few vessels. About 4 miles to the westward of Carrol Cove is the easternmost of two small islands, a mile apart, named the Little St. Modest Islands, which have a dangerous rock awash at low water off them, half a mile S.E. by S. from the west extreme of the western isle. St. Modest Isle, on the opposite or west side of Black Bay, is bare; within it, fishing vessels moor to the rocks on either side.

BLACK BAY, 11 miles west of Red Bay, is 3 miles wide, and about 2 miles deep. It is open to S.E. winds, which send in a heavy swell, but there is tolerable anchorage in 10 fathoms off a fine sandy beach, to the west of a river at the head of the bay. There is a rocky shoal of 2 fathoms one mile N.E. of St. Modest Island.

From St. Modest Island, $1\frac{1}{4}$ mile S.W., is Cape Diable, and to the west of this is *Diable Bay*, which with Loup Bay, 3 miles farther, may be readily known by the magnificent cliffs of red sandstone, 300 or 400 feet high, which extend two or three miles between them. Schooner Cove is on the S.W. side of Loup Bay; it is open to the eastward, but fishing vessels use it in the summer months. There is a fishing establishment and several houses in this cove. The anchorage in *Loup Bay* is extremely good, particularly in the N.E. corner of it; and although open to the south, vessels ride here all the summer.

FORTEAU BAY, 4 miles westward of Loup Bay, is 4 miles broad between Point Belles Amours, the S.E. point, and Point Forteau, the S.W. point, which points bear from each other E. $\frac{1}{4}$ S. and W. $\frac{1}{4}$ N.; it is about $2\frac{1}{4}$ miles deep, and runs in to the northward. At the head of the bay is a fine sandy beach, and a large and rapid river, abounding in salmon. There is a fine fall of water $1\frac{1}{4}$ mile within the bay, from Point Forteau, which, with a remarkable high rock off the S.W. of and the lighthouse on Point Belles Amours, will serve to point out the bay to strangers. This lighthouse is circular and built of stone, with external facing of fire bricks of a light colour, and 109 feet in height. It stands in lat. $51^{\circ} 27' 35''$ N. and long. $56^{\circ} 50' 53''$ W., and shows a fixed white light at 155 feet above high water level, visible about 18 miles, and exhibited from 15th April to December 31st. Signals are given by means of an air or fog whistle, sounded at short intervals, during foggy weather and snow storms; or, by a nine-pounder gun fired every hour whenever the whistle is out of order.

Forteau Bay is considered to be the best roadstead in the Strait of Belle Isle, and the Jersey vessels employed in the fishery lie moored all the summer; they have large fishing establishments on the west side of the bay. The best anchorage is on the N.W. side, opposite the fishing establishments. From Point Amour, across the entrance of the Strait of Belle Isle, to the N.W. extremity of Newfoundland, the distance is $9\frac{1}{2}$ miles.

Four miles W.N.W.-ward from Forteau Point is a small bay open to the southward, named *St. Clair*, which affords no anchorage. Off its east point a small low islet and reef extend some distance.

About 3 miles to the westward of *St. Clair* Bay is the bay of *Blanc Sablon*, which is exposed to westerly winds, but sheltered to the S.W. by two islands named Wood and Greenly. It is an unsafe anchorage, particularly in the fall of the year, and during winds from the west, which send in a very heavy sea. It is a mile deep, and $1\frac{1}{2}$ mile wide; and on a projecting point at the head of the bay are the buildings of a fishing establishment. Close to the east side of this projecting point is a reef of rocks which runs off 300 fathoms from the shore.

Wood Island, off *Blanc Sablon* Bay, is low and barren, and about $1\frac{1}{2}$ mile long: it has some fishing establishments on its east side. From its west side a reef extends a quarter of a mile.

Greenly Island lies $1\frac{1}{2}$ mile west of Wood Island, and between them is a clear channel. Off the south point of the island, at the distance of about 200 fathoms, is a rocky shoal. On its east side is a cove sometimes used by the fishers, but this anchorage, as well as that under Wood Island, is not good.

One mile and a half westward of *Blanc Sablon* Bay is Gulch Cove, a small inlet of the main, off the entrance of which there are some rocks which shelter it; it is so narrow, that there is not room for the smallest schooner to turn about in it, hence the vessels which frequent it are warped out stern foremost.

From *Blanc Sablon* Bay to Grand Point the distance is $2\frac{1}{2}$ miles. Off it is a dangerous reef of rocks, 350 fathoms to the south and west; and eastward of this reef, for $1\frac{1}{2}$ mile, there are rocks above and under water, extending off the shore for a quarter of a mile in some places.

Perroquet Island lies N. by W. $\frac{1}{2}$ W. $1\frac{1}{2}$ mile from Grand Point. It is high, and less than half a mile in diameter, and frequented by vast flocks of puffins. It is nearly half a mile from the land, but there is no channel between.

Three miles in the same direction (N. by W. $\frac{1}{2}$ W.) from Grand Point, is the edge of the shoals on the south side of Ledges Island, between which island and Perroquet is the passage to Bradore Harbour. Opposite to the centre of this island, on the main, to the eastward, is an establishment which is about $1\frac{1}{2}$ mile N.N.E. from the west side of Perroquet Island.

BRADORE HARBOUR.—Bradore Harbour, on the east side of Ledges Island, should be approached from the southward, between a chain of islands off the island, which are quite bold-to, forming the western side of the channel, and the coast of the main, on which is the before-mentioned establishment, forming the eastern side. There is no passage to this harbour to the north or west of Ledges Islands, as the space is crowded with rocks and dangers, although there is a narrow and very deep channel for small vessels close on the island. To enter Bradore Harbour, coming from the eastward, give Grand Point a berth of half a mile, to avoid the reefs lying off it, or take care that the west extreme of Perroquet Island does not bear to the west of N. $\frac{1}{2}$ E. Perroquet Island may be passed as near as a quarter of a mile. Having passed it, haul towards the entrance till the west extreme of Greenly Island is half a point open of the west extreme of Perroquet Island, or bearing S. by W., in order to clear the Gull Rock and Ledge, which bear S.W. by W., and are distant 280 and 490 fathoms respectively from Point Jones, on which the houses stand. The rock just covers at high water, and can nearly always be seen; but the ledge has 2 fathoms least water, and therefore is extremely dangerous. On the west side of this ledge, the west ends of Perroquet and Greenly Islands are in one, and they may therefore be avoided by the course above mentioned. Proceed on this course N. by E., till Jones's house bears E.N.E., and the northern islet on the east appearing like the north extreme of Ledges Island, N.E. by N.; then steer for the latter, leaving the Gull Rock to the east, and looking out for a small rock lying off an island on the opposite side, after passing which, the channel is clear, keeping nearer the islets than the main. A run of about 700 fathoms from the houses will bring you opposite the

entrance of the harbour, when you must haul sharp round to the westward, between the islets into the harbour; this entrance is 80 fathoms wide and 8 fathoms deep. The harbour is perfectly land-locked, and will accommodate but a small number of vessels: the depth is from 4 to 17 fathoms, muddy bottom.

In approaching Bradore Harbour from the west, beware of the reefs, extending three-quarters of a mile to the south-west of Ledges Island, which may be cleared by not bringing Perroquet Island to bear to the southward of S.E. by E. until Jones's house bears N.E. by E.; then steer for the latter until the marks come on for clearing the Gull Rock and Ledge, when you must proceed as before directed.

To the north-west of Bradore Harbour are the Bradore Hills, conspicuous as being the highest land on the coast. They consist of three round-backed mountains, the northernmost of which is the highest, being 1264 feet above the level of the sea.

Bradore Bay, between the Harbour and Point Belles Amours, is considered to be dangerous on account of the straggling rocks scattered about, and of its exposure to southerly winds, which send in a heavy sea. Point Belles Amours is a mound of red granite, 60 or 70 feet high and will be easily recognised.

BELLES AMOURS HARBOUR.—This harbour lies to the north-east of Point Belles Amours, the north-east side of the entrance being named Stony Point, from which at $1\frac{1}{2}$ mile S. by E. are the Flat Rocks. Harbour Point is a bare granite hill, 150 feet high, with several stone beacons upon it, situated $1\frac{1}{2}$ mile within Point Belles Amours on the western side. To enter the harbour by the eastern passage, steer N. by W. $\frac{1}{2}$ W., so as to leave the Flat Rocks a quarter of a mile to the eastward; proceed on this bearing until you have approached the east side of Harbour Point, as near as 100 fathoms, taking care, however, not to approach Stony Point within a cable's length. Then steer North until you are abreast of the rock above water off the sandy part of Harbour Point, when you must haul a little to the westward, so as to bring the east side of Harbour Point and Pond Point (nearly opposite to Stony Point) in one. Keep them in one, in order to round the north extreme of the Flat, and you will have 4 fathoms until Mark Point (the extreme on the north side within the harbour) comes on with Peak Point (a remarkable rocky point in Middle Bay), seen over the low land at the head of the harbour, and bearing W. $\frac{1}{2}$ S. As soon as this mark comes on, haul sharp round to the westward, keeping at a less distance than a cable's length from the high north-shore until you are well within the sandy spit, when you may haul to the southward, and anchor anywhere, in from 5 to 7 fathoms, muddy bottom.

Nearly midway between Point Belles Amours and the Flat Rocks, there is a rocky patch, with only 2 fathoms water upon it; and there are other patches of $3\frac{1}{2}$ fathoms between it and the point. To enter the harbour by this westerly passage, which is preferable in westerly winds, take care not to shut in Stony Point behind Point Belles Amours, for fear of the Middle Ledges, which lie off Middle Point, the outermost being 600 fathoms off shore. Pass Point Belles Amours at the distance of 200 fathoms, and keep at that distance from the shore till you have passed Pond Point; then bear away to Harbour Point, and proceed as before directed.

Belles Amours Harbour is a fine place, where a number of vessels may lie perfectly land-locked; water may be had, but wood for fuel is scarce.

At $1\frac{1}{2}$ mile W. $\frac{1}{2}$ N. from Point Belles Amours is Middle Point, with several rocks off it, and $1\frac{1}{2}$ mile farther is Five Leagues Point, the coast between bending inwards 2 miles, and forming a fine open bay named Middle Bay, in which you may anchor in from 4 to 13 fathoms, sandy bottom, free from all danger. For the first mile in, the shore should not be approached nearer than 150 fathoms.

Five Leagues Point is the extremity of a low peninsula which is remarkable for an isolated and precipitous hill nearly 200 feet high, at three-quarters of a mile north-east from the point. Off the point a reef runs a quarter of a mile to the south-west, outside of which, in the same direction, are the two Barrier Reefs, which may be cleared by bringing the south extremities of Middle and Belles Amours Points in one, bearing E. $\frac{1}{2}$ S.

To the westward of Five Leagues Point is the harbour of the same name, which is quite unfit for any but small vessels. At $3\frac{1}{2}$ miles W. by N. from Five Leagues Point, is Salmon Islet, which is nearly joined by a spit of sand to Caribou Island, and off which the shoals extend nearly 400 fathoms to the S.E. Between Caribou Island and the main, to the east of it, is the eastern entrance to Salmon Bay,

which has but 6 feet depth at low water; the other entrance is from Bonne Esperance Harbour round to the north of Caribou Island, in which is plenty of water, and good shelter.

BONNE ESPERANCE HARBOUR, considered to be the best on this part of the coast, lies to the westward of Caribou Island. A good mark for the harbour is Whale Island, the south-easternmost of the Esquimaux Islands, which lies N.W. by W. $\frac{1}{4}$ W., $18\frac{1}{2}$ miles from Greenly Island, at the entrance of the Strait of Belle Isle, and is made conspicuous by a roundish hill near its centre, having on its summit a pile of stones, as there is also on almost every one of these islands. Whale Island bears W.S.W. $\frac{1}{4}$ W., $4\frac{1}{2}$ miles from Salmon Islet before mentioned. Between them lie the islands forming the harbour, which are very steep, and of bare granite. To the south-west of Caribou Island lies Goddard Island, which is joined to it and another islet by shoal water; it has a small rock above water off it, 130 fathoms to the south-west, and 350 fathoms to the south of it is Goddard Rock, which dries at low water. On the other side of the channel, opposite to these rocks, are the Watch, a small uncovered rock, and Breaking Ledge, which just covers at high water. The entrance to the harbour between the various dangers, is 460 fathoms wide, with 17 fathoms water in the centre. Beacon Islet lies W.S.W. $\frac{1}{4}$ W., nearly a mile from Goddard Islet; it is rather low, and has a pile of stones on it. Three-quarters of a mile west of it is Red Head, an island bearing E.N.E. 900 fathoms from Whale Island; between them is Fish Islet. To the north-east of Red Head Island is Chain Island, formed of two peninsulas, and beyond it Bonne Esperance Island, three-quarters of a mile long and 150 feet high. Lion Island lies a quarter of a mile east of Bonne Esperance Island, and between them is a low islet joined to Lion Island by shoal water, but leaving a narrow and difficult channel between it and Bonne Esperance Island. Off the east side of Lion Island is the Whelp Rock, always uncovered, at 50 fathoms from the island. Between this rock on the west, and Goddard and Caribou Islands on the east, is, what may be termed, the inner entrance from the main channel; it is 450 fathoms wide, and has 10 to 13 fathoms water.

To enter Bonne Esperance Harbour, from the eastward, with the wind from the east, stand toward Caribou Island, and when off the south side, at half a mile from it, the south sides of Beacon and Red Head Isles, and the north side of Fish Islet, will be in one, bearing W. $\frac{1}{4}$ N. Bear up on this mark, or else steer West, keeping the lead going, and a sharp look-out for Goddard Rock. You will have about 9 fathoms at low water, until past this, when it will deepen suddenly to 15 or 19 fathoms, and then you will be in the channel. Steer immediately N. by E., and Whelp Rock will be right ahead and appear in one with the west side of House Island, which lies close under the main land, about a mile from Lion Island, and has a house on it. Keep on this bearing till past Bold Rock, off the south-west point of Goddard Island, when you must bear a little eastward to clear Lion Bank and Whelp at a cable's length, and then run up W.N.W. close along the inner sides of Lion and Bonne Esperance Islands into the harbour, anchoring where you please, in 12 to 16 fathoms, over a muddy bottom. The whole bay may be considered as a harbour, and is so good that it will afford accommodation for a fleet. Wood and water may be procured from the main land, but not from the islands.

In coming from the west with a westerly wind, keep half a mile from the south point of Whale Island, and steer E. by N., to avoid two 4-fathom dangers; one the Whale Patch, lying half a mile E. by S. from the centre of Whale Island, and the other two-thirds of a mile south of Beacon Island, named the Middle Patch. These may be avoided by not coming within a less depth than 10 fathoms, or by keeping southward of the track above mentioned. Keep on this bearing till Whelp Rock and House Island are in one, bearing N. by E.; then haul in upon that bearing, and proceed as before. There are several other entrances into Bonne Esperance Harbour between the surrounding islands.

To the north of Bonne Esperance Harbour are *Esquimaux Bay and Harbour*. Esquimaux Island lies in the middle of the bay, and forms, with the main to the east, a very narrow channel, which runs $1\frac{1}{2}$ mile E.N.E., and then opens into a wide space with two islets in it. The mouth of the river and the trading post may be reached by keeping along the east coast. The trading post is on a sandy point, backed by spruce trees, 2 miles above Esquimaux Island. The river abounds with

salmon; the approach to it from the westward is so intricate, from the number of islands, that no directions can be given.

ESQUIMAUX ISLANDS.—These islands commence at Caribou Island, and extend for 14 miles to the westward. They are generally bare of trees, and are of all sizes and heights under 200 feet. They form an endless number of channels, which it would be impossible to describe; and off them are several small rocks and shoals, some of which are fully 4 miles from the main land.

Proceeding westward from Whale Island, outside the island, $4\frac{1}{2}$ miles W. by N., we come to the outermost of the Fort Rocks, a cluster of low rocks extending 650 fathoms to the south-west of Old Fort Island, which island is of moderate height, and $1\frac{1}{2}$ mile in diameter. The only channel through the islands, between Whale and Old Fort Island, is the Whale Channel, between Whale and Tent Islands.

Mermot Islet, at $1\frac{1}{2}$ mile W.N.W. of the Outer Fort Rock, is low, and has a ledge off it a quarter of a mile to the south-west. Midway between Fort Rocks and Mermot Islet, the course in through Old Fort Channel will be N.E. $\frac{1}{4}$ N., with very deep water the whole way to Old Fort Bay, which runs toward the north-east for 4 miles, with deep water to its head.

The Dog Islands, to the westward of the Fort Rocks, are very numerous, and surrounded with innumerable rocks and shoals. There is anchorage between them and the main, which can only be got at easily by running down with a westerly wind from Shecatica, close along the main land, and in the channel between the latter and the scattered rocks and ledges which lie off it; where there is very deep water the whole way, of nearly 60 fathoms in some places.

To the northward of the Mermot Islands, and eastward of the Dog Islands, is a group of rocky islets, named the Eiders.

About $3\frac{1}{2}$ miles W.N.W. $\frac{1}{4}$ W. from the outer Dog Rocks are two or three black rocks above water, named the Porpoises, lying three-quarters of a mile from shore. Farther on, in the same direction, at the distance of $3\frac{1}{2}$ miles, is the Boulet, a small round-backed islet, green at the top and about 70 feet high, which, together with the opening to Lobster Bay, $1\frac{1}{2}$ mile E.N.E. from it, will serve to indicate to a vessel its position off the coast. Lobster Bay is completely exposed to south-westerly winds; it is about 4 miles in depth, by about 200 fathoms in width, and has 35 fathoms at the entrance, decreasing gradually to 14 fathoms half-way up, after which there is anchorage quite to the head, with muddy bottom.

At half a mile N.W. from the Boulet is Crab Islet, and $4\frac{1}{2}$ miles W. by N. from it are the Four Rocks, having within them the inner Islet. These are the only islets between the Boulet and Shecatica; but there are many rocks and ledges between them, and also off the Boulet, to seaward. Of these the most dangerous is the *Peril Rock*, which is very small, dries at half-tide, and lies $1\frac{1}{2}$ mile S.S.W. from the Boulet. It is the outermost and greatest danger off this part of the coast; the sea, however, almost always breaks over it, and also over the others which lie between it and the Four Rocks. There is no warning by the hand-lead in approaching any of these rocks, as they are all steep-to.

About a mile to the eastward of Lobster Bay is Rocky Bay, on the eastern side of which, at a mile within the entrance, there is a small cove frequented by the fishermen, who anchor in 5 fathoms, muddy bottom, and well sheltered from all winds; here there is a house and stage. To the westward of Lobster Bay, distant $3\frac{1}{2}$ miles, and very similar to it, is a straight and narrow inlet named Narpetepee Bay, which runs up to the north-eastward about $4\frac{1}{2}$ miles, and affords no shelter, being open to seaward.

About $3\frac{1}{2}$ miles W.N.W. from Boulet Island is Shecatica Island, which has near it, close to the main, the island of Mistanoque, within which is the bay of the same name; this bay runs inland 3 miles to the north-eastward, and has 27 fathoms water in the centre, decreasing to 17 fathoms at the sides close to the rocks. Half a mile from the head is anchorage on mud, in a convenient depth.

Opposite the mouth of the bay, on the north side of the island, is *Mistanoque Harbour*, having a depth of fifteen to twenty fathoms on a bottom of mud. Vessels may anchor in less water (about 12 fathoms) a little to the east, between the east point of the bay and the island, but the channel is only 80 fathoms wide. Half a

mile to the westward of Mistanoque is Enter Islet, and 90 fathoms farther Diver Islet, having on the southern side a reef, which runs out to the distance of 130 fathoms. These islets are low. About 400 fathoms to the N.W. of them is a group of small islands, forming with the others the western channel to the harbour, which is quite clear. There is nothing immediately outside of Shecatia, Mistanoque, Enter, or Diver Islands: so that no other instructions appear to be requisite than to run through the centre of either channel as may be preferred.

Nearly $7\frac{1}{2}$ miles, W. $\frac{1}{4}$ S. from Mistanoque is Shag Islet, which is very remarkable, being small and high, with a round-peaked hill looking green in the middle and is an excellent guide for making Mistanoque from the westward, as the Boulet is from the eastward. There are many rocks to the S.E. by E. of it, the outermost of which, the Shag Rock, is 2 miles distant. When three-quarters of a mile to the southward of the Shag Rock, the south point of Shecatia will bear E.N.E. 8 miles off, and this course will take you a mile to the south of the Three Rocks, lying midway between them.

The coast hence to the south-westward is broken into immense bays and inlets forming islands of moderate height, and partially covered with moss. The outer coast is lined with small islets and rocks, which are very difficult to pass through; while within them there is a great depth of water in the intricate channels and bays between the islands and the main.

CUMBERLAND HARBOUR, formed by Cumberland Island on the east, and Duke's Island on the west, lies N. by E. $\frac{1}{2}$ E., about 3 miles, from the outer Shag Rock, and may readily be distinguished by a remarkable high hill on the main land, appearing like a castle at its summit, having steep cliffs looking like walls; this hill lies northward, nearly $3\frac{1}{2}$ leagues, from the entrance to the harbour. The islands forming the harbour are moderately high, the eastern one making in two round hills. The harbour should be approached between the Shag Rock and the Three Rocks, which bear from each other E.N.E. and W.S.W., distant $2\frac{1}{2}$ miles. In sailing into this harbour there is no danger but what appears above water, excepting a small rock, which lies S. by W. rather more than half a mile from the west point of the entrance. The entrance is about 200 fathoms wide. As soon as you arrive within its outer points, haul over to the western side, and run along it to the inner point on that side, bearing N. by W. $\frac{1}{2}$ W. about three-quarters of a mile from the outer east point of entrance. As soon as you arrive there, you may haul to the eastward, and anchor where you please, in from 7 to 20 fathoms water, over good ground. This is an excellent harbour, the best and easiest of access on this coast; and good water can be had in plenty on the east side of the harbour; but for wood you must go up to Shecatia Bay.

Shecatia Bay lies 3 or 4 miles to the north-eastward of Cumberland Harbour, and runs inland to the northward many miles. It has many islands, branches, and narrow crooked passages, too intricate for any one to attempt who is not perfectly acquainted with the navigation of the coast.

SANDY HARBOUR.—This harbour lies N.N.W. $\frac{1}{2}$ W. $2\frac{1}{2}$ miles from Shag Islet, and is situated on the south side of Sandy Island. To sail in, pass to the eastward of the Egg Rocks, which bear N.W. by W. $1\frac{1}{2}$ mile from Shag Islet, and keep the starboard point of the bay (which is the west extreme of Duke's Island, bearing N.E. more than half a mile from the Egg Rocks,) on board in going in. You will then see a small rock above water, to the northward, lying over towards the east side off the entrance of the harbour, and which you may pass on either side, and then steer N.N.E. $\frac{1}{2}$ E. for the harbour, there being nothing in the way but what appears. After you have passed the entrance, which is about two cables wide, you must haul to the N.W. into the harbour, and choose your berth in 5 or 6 fathoms. This is a very safe harbour, with good ground. Here, as in Cumberland Harbour, is no wood to be had, but plenty of water. In making for this harbour, care should be taken to avoid a ledge under water, west of the Shag Rock, and about a mile south of Shag Island; and also another nearly a mile S. $\frac{1}{4}$ E. from the Egg Rocks, and W. by N. from the top of Shag Island. There is a small reef with shoal water extending $\frac{1}{4}$ of a mile from Shag Island towards this ledge, leaving a deep channel between, more than $\frac{1}{4}$ of a mile wide.

Port Augustine is a very small harbour, with a very narrow intricate entrance, and is fit for small craft only. The approach to it is to the westward of Augustine

Chain, a chain of small islets, the outermost of which is a round smooth rock, with a high black rock half a mile to the westward of it. Between these last-named rocks there is a ledge, which shows at one-third ebb. The passage is on either side of this ledge, and then northward along the west side of Augustine Chain.

The south extremity of Augustine Chain bears W. $\frac{1}{2}$ S. about 7 miles from Shag Islet. Between them lies Square Channel, the largest in between the islands, towards the main land. It is too intricate for description: at 14 or 15 miles up it, in a N.W. $\frac{1}{2}$ N. direction, is the entrance of the River Augustine with a sand bar across it, dry at low water. There is plenty of wood at this river.

Eagle Harbour, on Long Island, is unfit for anything but small vessels, the entrances being narrow and intricate. This part of the coast is very dangerous on account of the numerous islets and rocks off it.

Off the entrance of *Fish Harbour*, N. $\frac{1}{2}$ W. $4\frac{1}{2}$ miles from the Bottle on the north of Great Mecattina Island, is Wood Island, so called from its being covered with wood. The entrances to Fish Harbour are on either side of Wood Island, the northern being the best; there is a ledge to the south of the island, which always shows, and a rock with only 2 feet water upon it, one-third of a mile S.S.E. $\frac{1}{2}$ E. from the east point of the island. Wood and water may be obtained, and there is a trading establishment here.

HA-HA BAY.—This bay lies in the main, to the westward of Long Island, and has several small islands at its entrance, forming separate entrances. The best of these is, that which lies between Seal Point and Round Island, and leaves all the islands on the starboard side; this being a wide and safe passage, having no danger but what is visible. Ha-Ha Bay runs in to the N.E. by N. 8 miles, and has a depth, in one part, exceeding 60 fathoms: in it there are many islands at its head, on the starboard side. Within these islands, to the eastward, are numerous anchorages, with from 9 to 20 fathoms water. Vessels may occasionally anchor anywhere along the eastern side of the bay, in 12 and 14 fathoms, muddy bottom; but on the western side the water is too deep, N.N.E. about 2 miles from the entrance on the west side, is a high bluff head. Round this head, N.W. by W. half a mile, is a small but safe harbour for small vessels, in which you will have 12 fathoms, good ground. This harbour is formed by an island, on either side of which there is a narrow but safe passage.

GREAT MECATTINA ISLAND, to the southward of Ha-Ha Bay 2 miles S.E. from Red Point, the nearest part of the main. It is $3\frac{1}{2}$ miles long, north and south, 3 miles wide, and about 500 feet high in the centre. It is composed of granite, and the position of the island, with relation to the high land inside of Cape Mecattina, 4 or 5 miles W.N.W., distinguishes it from any other island in the Gulf.

Nearly joined to its north point is the Bottle, a high round islet, with a small rock close off it, to the N.W. by N.; and half a mile in the same direction is a rocky shoal of 4 fathoms. Bluff Head is the high N.E. point of the island; and between it and the Bottle is a cove, one mile deep, named Island Harbour, sheltered from the east by a cluster of small islets and rocks, having a passage on either side of them; the anchorage is near the head of the cove, in from 14 to 20 fathoms, good ground; here both wood and water may be obtained; if you enter by the south passage, keep Bluff Head on board; and if by the north, pass between the cluster just mentioned and a small isolated rock about $\frac{1}{4}$ of a mile N.W. of it, and a cable's length from the shore of Great Mecattina.

Treble Hill Island lies E. by S. about 3 miles from the centre of the island of Great Mecattina, Flat Island S.S.E. $\frac{1}{2}$ E. 3 miles from its south point, and the Murr Islets S.W. about 4 miles from the same point. To the N.E. by E. from the easternmost of the Murr Islands there is a ledge, on which the sea generally breaks. All these islands are quite bold-to, and swarm with sea-fowl. The Murr Islets are of considerable height, and flat at top; about $\frac{1}{2}$ a mile to the S.E. of the southernmost of them are two small and low rocks above water.

MECATTINA HARBOUR, behind Mecattina Island in the main, is safe but small, yet will admit vessels of burthen, there being not less than 3 fathoms at low water in either passage to it; but they must moor head and stern, there being no room to moor otherwise. This harbour lies $3\frac{1}{2}$ miles N.W. by W. $\frac{1}{2}$ W. from Round Head, a high peninsula on the west side of Great Mecattina Island, and $5\frac{1}{2}$ miles N. by W. $\frac{1}{2}$ W. from the Murr Islets. It is only 28 fathoms wide in the western entrance,

and 60 or 70 fathoms wide within. It may be safely taken by small vessels in fine weather, but not in stormy weather, the entrance being so narrow; the least neglect in steering might place the vessel on shore. To sail in through the western passage there is no danger, but to sail in through the eastern channel you must observe the following directions:—From the eastern point of Mecattina Island steer N. by W. towards the main land, keep that close on board, until you get the N.W. point of the island at the western entrance on with the south point of Dead Cove; this is a small cove on the main, which lies open to the eastward; the land which forms it is very low, with some brushwood upon it. Sail on, in that direction, until you get above a stony point, which is the north side of the said cove; or until you bring the north point of Gull Island, which is a small island lying E. by N., distant a mile from Mecattina Island, on with the E.N.E. point of Mecattina Island, you will then be within a spit of rocks which stretches off the island, and must haul over for Mecattina Island, in order to avoid a ledge running off from the south point of Dead Cove; and when you open the western passage, you may anchor in 6 or 7 fathoms water.

Vessels coming from the eastward, and bound for the harbour of Mecattina, in passing between Gull Island and the main, should be careful either to keep Gull Island or the mainland close on board, in order to avoid a sunken rock that lies nearly half-way between them, on one part of which there are not above 3 feet water. The highest part of the land between Grand Point and Ha-Ha Bay is directly over the harbour of Mecattina.

CAPE MECATTINA, or GRAND POINT, is the extremity of a promontory, running out from the main land; it is low at the point, but rises, inland, gradually, until it becomes of considerable height; it may easily be recognised by the adjacent islands and rocks, the nearest of which is a small low rock not far from the point. Two of these islands are much larger, and rise much higher than the others, and are named the Dyke Islands; the outermost are small, low, rocky islands, lying $2\frac{1}{4}$ miles off the point; they all lie in a S.S.E. $\frac{1}{2}$ E. direction from the point. Vessels bound to Mecattina Harbour from the westward either pass through the clear and deep channel between the Northern Murr Islet and the Outer Rocks, or between the islands, for there is a safe passage on either side of Entrance Island, the second from the point; the best channel however among these islands, is between Entrance and Dyke Islands. The cape is situated in lat. $50^{\circ} 44\frac{1}{2}''$ N., and long. 59° W.

Portage Bay, to the westward of Mecattina Harbour, is 2 miles N. by E. from the south point of Cape Mecattina. It runs in about $1\frac{1}{2}$ mile to the northward, and affords some shelter. A small islet lies in the mouth of the bay, towards the east side, which forms a small harbour, the western entrance to which is the best. In the approach to this harbour there are two 15-foot ledges to be avoided, one 400 fathoms S. $\frac{1}{2}$ W. from the west end of Mutton Island, and the other half a mile N.E. by E. from the southern Seal Rock, which is three-quarters of a mile N.E. by N. from the south point of Cape Mecattina.

The Great Island of Mecattina being the most remarkable land about this part, vessels frequently make it their point of departure, and shape their courses from it to other places. When without the Murr Rocks a W. by S. course, 55 miles, will take you without the rocks to off Cape Whittle; though by this course you will pass very near to St. Mary's Reefs. From the Murr Islands to Wood Island, near Grand Point, at the entrance of the Strait of Belle Isle, the course is E. $\frac{1}{2}$ N., 75 miles.

LITTLE MECATTINA ISLAND is $7\frac{1}{2}$ miles long, in a N.N.E. direction, and 3 miles wide. It lies W.S.W. $\frac{1}{2}$ W., 15 miles, from Cape Mecattina; between them is a large bay, studded with numerous islands and rocks, which should have a good berth given them. Salaberry Bay, on the west side of this island, cuts it nearly in two. The northern part of the island is low land, joined to the southern part by a very narrow isthmus; while the southern part is high, the highest point being about 560 feet above the level of the sea. Little Mecattina River is large, and falls 30 feet over granite, a short distance within the entrance, and about $2\frac{1}{4}$ miles N.N.W. from the north end of the island.

Little Mecattina Island, having no channel between it and the main for vessels, and scarcely even for boats at low water, may be considered as forming the west side of a large bay. The promontory of Mecattina forms the east side of this bay, which,

as already mentioned, is filled with islands and rocks innumerable, among which no vessel could find her way, and where it is possible to lose oneself for a time in a boat.

Hare Harbour, on the east side of Little Mecattina Island, has depth and room enough for the largest ships, but has several rocks and ledges in it, which render it difficult to strangers. As it opens to the southward, the prevailing westerly or easterly winds are favourable for sailing in, and are generally accompanied with a smooth sea in the entrance. It is only when the wind is well to the southward that there is any swell, and even then it never rolls into the harbour so as to affect a vessel.

In order to enter this harbour with an easterly wind, you ought to pass to the southward of the Fin, Scale, and Single Rocks, at the distance of about half a mile. The Single Rock is just awash, and has three sunken rocks near it, and should not be approached nearer than a quarter of a mile, as the sunken rocks are 150 fathoms from it. There is nothing in the way to the westward of the line from Single Rock to the Eden Islands, excepting the Cat Rocks, above water, and Staff Islet and its ledges. When abreast of the Single Rock, haul round to the north-westward by degrees, and when you are half a mile to the westward of the rock, the entrance of the harbour will bear N.N.W., with nothing in your way, and you may steer directly for it.

When coming in with a westerly wind, steer N.N.E. $\frac{1}{2}$ E., passing Point Antrobus, the eastern point of Little Mecattina Island, at the distance of one-third of a mile; continue on N.N.E. $\frac{1}{2}$ E., leaving the Cat Rocks and Staff Islet and Ledges on your port hand, coming no nearer the latter than a quarter of a mile; and, when abeam, you will see the entrance of the harbour bearing N. $\frac{3}{4}$ W., distant a mile. You cannot mistake it, because there is no other channel through which you can see clear into the harbour from that position. The entrance, 170 fathoms wide and 20 fathoms deep, is between Daly and Price Islands; or, from the former position abreast of Staff Islet, continue on N.N.E. $\frac{1}{2}$ E., 300 fathoms farther, till the entrance bears N.N.W., then haul directly in for it, leaving Eden Islands and Price Island on your right hand, and giving the S.W. extreme of the latter a berth of not less than 30 fathoms. Daly Island on your left, or to the westward, is quite bold.

About 170 fathoms within the entrance on the east, or Price Island side, you will see the small Watch Rock above water, and farther in a very small islet, named Bold Islet, which lies about one-third of a mile within the entrance and 80 fathoms W.N.W. from the inner end of Price Island, and is quite bold. On the west side, bearing N. $\frac{1}{4}$ W. 200 fathoms from the east extreme of Daly Island, lies Safe Rock, very small and above water, and is quite safe on its east side; and nearly mid-way between Safe Rock and Bold Islet lies Rag Ledge, which just dries at low water. This is the principal danger in the way, but it can almost always be seen from aloft, and there is a clear channel on either side of it, a long cable wide, with a depth of from 12 to 15 fathoms. The western channel, however, is the better; and the course from the centre of the entrance to it, so as to pass within half a cable of the Safe Rock, is N. $\frac{1}{2}$ W. one-third of a mile. When within these dangers, you must choose your anchorage by the lead, for there are several patches of rock with from 4 to 6 fathoms, although the bottom is in general of mud, with from 9 to 14 fathoms water. In doing this, however, there is one more danger to be avoided, namely, the Foul Rock, a 2-fathom patch bearing exactly North 600 fathoms from the S.W. point of Price Island. Until within this rock, therefore, you should keep more than half-way over from the islands forming the east side of the harbour, towards its western shore. You may, if you choose, run in nearly half a mile farther than this patch, and anchor to the eastward of Cluster Point, which consists of some low small islets and rocks extending off the Little Mecattina shore; this position is considered the safest in the harbour.

The south shore of Little Mecattina Island, as far as Cape Mackinnon, is high and bold, with remarkable beaches of white boulder stones occasionally. About $1\frac{1}{2}$ mile W.N.W. $\frac{3}{4}$ W. from the cape is a dangerous reef, awash at low water, named the Spray Reef, which is bold to all round, and should always be passed to the westward when entering Aylmer Sound.

Aylmer Sound, to the westward of Little Meccatina Island, affords no anchorage until beyond the Doyle Islands at its head, behind which is Lou Road and Louise Harbour; in the latter vessels can ride in 4 fathoms, in the southern part of the

harbour, but will be exposed to the W.S.W., although protected in a great measure by the Doyle Islands. To sail into this harbour or into Lou Road, keep the eastern side of the Doyle Islands aboard, by which you will clear some ledges lying in the entrance of Salaberry Bay to the N.E.

The western side of Aylmer Sound is formed by a cluster of high islands named the Harrington Islands, the extremity of the outermost of which is named Cape Airy. There is no passage between these islands on account of the multitude of rocks. Off Cape Airy at the distance of 2 miles S. by W. $\frac{1}{2}$ W. is the Black Reef, composed of low black rocks above water, and W. by N. $1\frac{1}{2}$ mile from the cape is Major Reef, awash at low water, and 3 miles farther are the Netagamu Islands, within which and the Harrington Islands, the mainland bends inwards and forms a bay, having a quantity of rocky islets at the entrance. On the largest of the Netagamu Islands is a remarkable mound.

About $1\frac{1}{2}$ mile N. by W. from the Netagamu Islands is the river of the same name, which may be known by a sandy beach, backed with a thick growth of fir trees, on either side of the entrance, which entrance, though narrow, has deep water close up to the falls, a distance of $1\frac{1}{2}$ mile; these falls are 50 feet high. A bar of sand, with 3 feet over it, extends a mile from the entrance, and is extremely dangerous to boats because of the heavy surf. The current of the river is rapid.

Ten miles W.S.W. from Cape Airy are the St. Mary Islands, estimated to be 200 feet high; they are composed of bare steep granite, and bold all round. To the westward of them are the clusters of the Cliff and Boat Islands, separated by a channel half a mile wide, with 17 to 30 fathoms in it.

To the northward of these clusters of islands is Watagheistic Island, 3 miles long and above $1\frac{1}{2}$ mile broad, lying at the entrance of a large bay, within which is a large sound containing several good anchoring places, but unapproachable without passing through 7 miles of dangerous navigation. To the north of the St. Mary Islands are several islets, rocks, and reefs, the largest of which islets is Cove Island, bearing 4 miles N.N.W. from the north point; there are thickly scattered rocks, both above and below water, between it and the Netagamu Islands. The eastern entrance, between Watagheistic Island and the main, is narrow and intricate, but the western entrance is half a mile wide; and though there are several rocks and ledges in it, yet it can be safely sailed through with proper care; but there is no good anchorage on the route to, or outside either entrance to Watagheistic.

St. Mary Reefs are four very dangerous ledges, just under water, extending a mile, north and south; the southernmost bearing S.W. $\frac{1}{4}$ S. $3\frac{1}{2}$ miles from the S.W. extreme of the Boat Islands; W.S.W. $\frac{1}{4}$ W. 6 miles from the S.W. extreme of the St. Mary Islands, and S.E. $\frac{1}{2}$ S. $3\frac{1}{2}$ miles from the westernmost of South-west Islands. The Tender Rock, small and awash, lies N. by W. $\frac{1}{2}$ W. a mile from the northernmost St. Mary Rocks, and 2 miles S. $\frac{1}{4}$ W. from the westernmost of the Middle Islands, which lie between the Boat Islands, between them and Watagheistic.

Between the Middle Islands and Wapitagan, the coast is broken into coves, and lined with innumerable islets and rocks, among which nothing but a very small vessel perfectly acquainted with the coast could find her way. There is nothing worth noting except the Etamamu River, which enters the sea at 4 miles N.F. from Wapitagan: it is rapid, and there is a trading and salmon-fishing post at its mouth.

Mistassini Stone, situated upon the S.E. extreme of the outer Wapitagan Islands, is a remarkable block of granite resembling a mortar, and hence sometimes named the Gun by the fishers. It is an excellent guide to the eastern entrance to Wapitagan, from which it is distant three-quarters of a mile to the westward.

Southmakers Ledge lies S. $\frac{1}{4}$ W. $3\frac{1}{2}$ miles from the Mistassini Rock; West 9 miles from St. Mary Rocks; and $6\frac{1}{2}$ miles S.E. $\frac{1}{4}$ E. from Cape Whittle. The course from this dangerous reef to Greenly Island, near the entrance of the Strait of Belle Isle, is E. $\frac{1}{3}$ N., distance 128 miles. It is a small rock, which is never entirely covered in moderate weather; the extent of the reef around it is 130 fathoms east and west, and 50 fathoms north and south, and there is no danger near it. The soundings are very irregular round it.

WAPITAGUN HARBOUR is a long narrow channel between the outer islands of Wapitagan, which are of bare granite, and appear as but one island, and Wapitagan Island to the northward of them, and is completely sheltered; the western entrance to the harbour is sharp round the western extremity of the outer Wapitagan Islands,

which lies E. $\frac{1}{4}$ S. from Cormorant Point, 600 fathoms off. This entrance is about 80 fathoms wide, and the harbour itself is narrow and unsuitable for vessels above 150 or 200 tons.

To enter from the southward with an easterly wind, steer for the eastern entrance, which has been indicated, and you will meet with nothing in the way. On the west side of the entrance there is a rock and ledge which shows, and therefore you must keep on the east side, steering N.W. by N.; one-third of a mile within the entrance there are three small islets, and to the northward a cove, in Wapitagan Island, running in to the westward, round a steep rocky point, which has a sunken rock close off it to the S.E. Leave all three islets to the left, passing close to them, and bear up to the westward between them and the steep rocky point; this is the safest passage, but a good look-out ought to be kept.

To enter the harbour with a westerly wind, run down between the Southmakers Ledge and the Cormorant Rocks, which lie to the south of Lake Island, bearing to the north to pass the S.E. Cormorant Rock, at the distance of half a mile. This rock will be readily known from the Nest Rock, covered with birds and whitened by them, and 120 fathoms to the west of it; 400 fathoms to the N.E. of the S.E. Cormorant, is a two-fathom ledge, which must be left on the left. Then haul to westward a little, so as to leave the Slime Rock or N.E. Cormorant not less than 300 fathoms on your left, to avoid another two-fathom ledge, bearing N.E. $\frac{1}{4}$ N. one-quarter of a mile from that rock. Passing close to the east of this, steer for the islet in the channel, which you will see between the west extreme of the outer Wapitagan Islands and Cormorant Point; but to pass to the eastward of Long Ledge, lying midway between Slime Rock and Cormorant Point, the course must not be above N.N.W. $\frac{1}{2}$ W., or the west end of the before-mentioned islet, on with the high point, which is the east end of Lake Island, lying northward of the islet. When within 2 cables' lengths of the islet, the harbour will begin to open to the eastward, when you must bear up quickly for it, leaving the islet to the northward, keeping 200 fathoms off the west point of the outer Wapitaguns, to clear a ledge lying off it, and when it bears to the eastward of North, proceed into the harbour and anchor where you please. The best berth is in a small bay on the south side of the harbour, 600 fathoms within the western entrance, in 7 fathoms.

CAPE WHITTLE, the south-west point of Lake Island, has many dangers off it to the southward and westward, the two outermost of which, named the Whittle Rocks, are half-tide rocks. All these rocks are steep, with from 20 to 40 fathoms water between them. The cape is considered to be in lat. $54^{\circ} 10' 44''$ N., and long. $60^{\circ} 7\frac{1}{2}'$ W., and from it the coast of Labrador changes its south-westerly direction, which it had hitherto maintained, to west. Wood can be obtained on Lake Island, but for water it is necessary to visit the main-land.

The flood from the eastward and ebb from the westward usually run past the entrance of Wapitagan, at a rate varying from a half to a mile; but both streams are much influenced by the winds. (See page 13 of the Gulf and River St. Lawrence Directions.)

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